2003

Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

The Commissioner's Perspective—2003

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Office of the Auditor General of Canada

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The 2003 Report of the Commissioner of the Environment and Sustainable Development comprises four chapters and The Commissioner's Perspective—2003. The main table of contents is found at the end of this publication.

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Commissioner of the Environment and Sustainable Development of Canada
Commissaire à l'environnement et au développement durable du Canada
Office of the Auditor General of Canada • Bureau du vérificateur général du Canada

To the Honourable the Speaker of the House of Commons:

On behalf of the Auditor General of Canada, I have the honour to transmit herewith my Report to the House of Commons for the year 2003, to be laid before the House in accordance with the provisions of section 23(3) of the *Auditor General Act*.

Johanne Gélinas

Johanne Gélinas
Commissioner of the Environment
and Sustainable Development

OTTAWA, 7 October 2003

To the reader:

I welcome your comments and suggestions on this Report and other issues related to the environment and sustainable development. I can be reached at the following:

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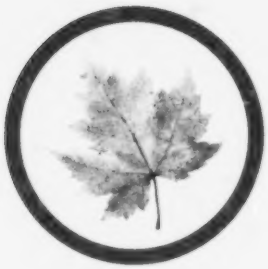
Foreword



Report of the Commissioner of the Environment and Sustainable Development—2003

Foreword

As Commissioner of the Environment and Sustainable Development, I am pleased to present the 2003 Report for tabling in the House of Commons.

This Foreword is followed by The Commissioner's Perspective—2003, and the Main Points from each chapter. The Report contains four chapters:

1 Managing the Safety and Accessibility of Pesticides

2 Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases

3 Sustainable Development Strategies: Case Studies

4 Environmental Petitions

The Commissioner's Perspective—2003

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The Commissioner's Perspective—2003
The Gap Between Commitments and Actions

Main Points

1. Each year, I highlight significant issues based on my environmental audit work over the past year. This year, I focussed on pesticides management, road transportation in urban areas, case studies on federal sustainable development strategies, and the petitions process.

2. This Report deals with the gap between federal environmental commitments and actions. The most pressing issues I identified relate to how the federal government manages the safety and accessibility of pesticides. Specifically, I have found that the federal government

- has made slow progress on re-evaluating older, widely used pesticides against today's higher health and environmental standards. All of the re-evaluated pesticides have either been removed from the market or had restrictions placed on their use. Pesticides slated for re-evaluation remain on the market and it is likely that some of them do not meet today's standards;
- needs to strengthen its evaluation process for new pesticides—for example, it has sometimes skipped steps in its process and has overused temporary registrations;
- is not consistently meeting deadlines to ensure that new, possibly safer products are available to users, despite significant improvements in the rigour and timeliness of the submission process; and
- has incomplete information on user compliance, pesticide use, and the impacts of pesticides on human health and the environment.

3. Other issues related to the federal government's commitments involve Canada's Kyoto target. After a great deal of deliberation, the federal government ratified Kyoto—a major international environmental agreement. I chose to examine how selected urban road transportation programs would contribute toward Canada's Kyoto target. I found that the federal government is taking steps intended to help meet its Kyoto commitments; however, for various reasons it is currently unable to report on the contribution its measures are making.

4. The federal government has made a clear commitment to move Canada on a path to sustainability through its sustainable development strategies. These strategies are the responsibility of 25 major federal departments; they involve economic, social, and environmental issues. This year I took a targeted look at four departments and found mixed results. I note that Industry Canada has made a substantial effort to move forward on

eco-efficiency and environmental technology. However, in all the cases I examined, more could be done to improve the measuring and reporting of the impacts of actions taken. Environment Canada and Human Resources Development Canada need to substantially increase their efforts to fulfil the commitments that we examine in this Report.

5. The petitions process is a growing success story. Canadians increasingly use this process to engage the federal government in issues that affect them at the local level. In some cases, Canadians are getting both commitments and actions that lead to concrete results. This year, I have begun to follow up on some commitments made in response to petitions, and I found mixed results. I will continue to follow up on petition commitments made by departments.

Johanne Gélinas
Commissioner of the Environment
and Sustainable Development

Keeping a watch on the environment

6. This is my third report as Commissioner of the Environment and Sustainable Development. I am the environmental arm of the Office of the Auditor General and provide objective information to help Parliament keep watch on whether the federal government is meeting its commitments to protect the environment and promote sustainable development.

7. My mandate is to alert Parliament to significant environmental and sustainable development issues by providing timely and relevant information on the findings of my work. I observe how the federal government has carried out its policies and programs and, where appropriate, I recommend improvements. I am pleased that parliamentarians and the public show a growing awareness of my work.

8. My staff and I

- conduct studies and value-for-money audits;
- monitor and report on federal sustainable development strategies; and
- oversee the petitions process.

9. This year I have chosen to look at whether the federal government has met selected environmental and sustainable development commitments. My review found a gap between the commitments made and the results achieved. This gap contributes to the environmental deficit that I reported on last year: I said that the federal government was not investing enough of its human and financial resources; its legislative, regulatory, and economic powers; or its political leadership to fulfil its sustainable development commitments.

Auditing for results

10. We conduct value-for-money audits that look at whether programs are working as intended and achieving the expected results. We investigate specific issues and report to Parliament our findings, conclusions, and recommendations. This year's audits are reported in Chapter 1, Managing the Safety and Accessibility of Pesticides, and Chapter 2, Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases.

Strategies for a sustainable tomorrow

11. In addition to the value-for-money audits, we monitor and report on the progress that departments and agencies have achieved in implementing the commitments in their sustainable development strategies. The strategies are important tools that represent the objectives and action plans of departments and agencies for furthering sustainable development. Departments are required to update their strategies at least every three years; their second round of strategies was tabled in Parliament in February 2001.

12. A document that I released in March of this year, *Making a Difference*, sets out my expectations for the third round of sustainable development strategies, which federal departments and agencies are expected to finalize in

December 2003. (This document is available at www.oag-bvg.gc.ca/domino/cesd_cedd.nsf/html/03sds.html.)

13. I strongly believe that these strategies should drive federal actions and policies and produce concrete, measurable results. Parliament requires that federal departments and agencies prepare sustainable development strategies to help ensure that their actions today consider the needs of future generations—a concept reaffirmed by Canada at the 2002 World Summit on Sustainable Development in Johannesburg.

14. In last year's Report I recommended that, in preparation for the third round of sustainable development strategies, the Privy Council Office lead a renewal of the government's commitment to sustainable development; that it develop a clear and long-term image of sustainability for Canada; and that it provide guidance and direction to departments. The Privy Council Office in turn assigned this responsibility to a committee of deputy ministers and indicated that a federal-level sustainable development strategy was being developed. No timeline has been set to finalize this federal-level strategy. I am advised, however, that the deputy ministers are in accord with my expectations; they have provided departments with additional direction, including an outline for a guiding vision, government-wide priorities, and provisions for performance measurement and accountability.

15. This year I have taken a more targeted approach to monitoring and reporting on sustainable development strategies by examining specific commitments and the results achieved (see Chapter 3). I expect to continue this approach in the future.

Canadians can be their own environmental watchdogs

16. Parliament established the petitions process so citizens could raise questions and concerns about environmental and sustainable development matters that involve the federal government. The petitions process allows Canadians to receive timely answers from federal ministers. These petitions are not the traditional kind with thousands of signatures; they can be as simple as a letter from a Canadian citizen. The petitions process is a powerful tool that gives every Canadian the opportunity to be an environmental watchdog.

17. The number of petitions submitted annually has grown substantially in recent years. More important, Canadians are getting action on their concerns and are making a difference. As a result of recent petitions, federal departments and agencies have changed or clarified their policies and practices, undertaken site inspections, and launched new environmental projects.

18. As the guardian of the petitions process, I am committed to ensuring that the opportunities it affords are realized. In past responses to Canadians who have submitted petitions, departments have made a number of commitments. I am encouraged to see that for the most part they are taking their commitments seriously. (A catalogue of petitions and the responses received from ministers is available at www.oag-bvg.gc.ca/domino/petitions.nsf/english.)

How my work makes a difference

19. My powers are those of persuasion and disclosure. Once my Report has been tabled in the House of Commons, it is public information. Parliamentary committees can question federal ministers and government officials about my findings and about how they will implement my recommendations. I also monitor departmental progress on my recommendations and I conduct selected follow-up audits of important environmental and sustainable development matters. In this way, the very presence of the Commissioner's Office and my reporting of significant environmental issues contribute toward sustainable development by motivating departments to live up to their commitments.

My priorities

20. My choices of subjects to audit reflect areas that I want to help change for the better and that I consider significant enough to warrant bringing them to Parliament's attention. I select audit subjects from

- discussions with parliamentarians;
- an extensive list of environmental and sustainable development issues that I compiled soon after being appointed Commissioner, and then analyzed for their level of risk and whether they fell within my mandate;
- the environmental concerns expressed by Canadians through the petitions process; and
- issues raised in my meetings with Canadians across the country.

I also consult at least once each year with a panel of expert advisors who include representatives from industry and from environmental organizations; academics; and former senior government officials. The panel provides guidance for my work.

21. Over the coming years, I plan to conduct audits in the following areas:

- international aspects of sustainable development including international environmental agreements, official development assistance, and strategic environmental assessments;
- protection of our vital resources such as water and air;
- biodiversity and the ecological integrity of national parks;
- protection of our natural resources such as forests, minerals, and oil and gas; and
- progress achieved by the federal government in the five years following the Johannesburg World Summit on Sustainable Development.

22. I will continue to report annually on federal sustainable development strategies and on the results of the petitions process, including what federal departments have done to fulfil the commitments made in their responses to petitions.

23. Since fall 2001, on behalf of the Auditor General of Canada I have chaired the International Organization of Supreme Audit Institutions

(INTOSAI) Working Group on Environmental Auditing. The goal of the Working Group is to improve and promote environmental and sustainable development audit tools for use by auditors general around the world. Environmental and sustainable development issues are global, and I am excited by the powerful role legislative auditors can play in assisting legislative bodies to hold their governments to account for environmental performance.

24. The Working Group on Environmental Auditing is currently developing training materials for courses it plans on environmental auditing. It is exchanging information and preparing environmental guidance papers. (More information can be found at www.environmental-auditing.org.) Currently, I am working with many of those audit offices to develop a strategy for a collective evaluation of our respective governments' efforts to act on the Plan of Implementation developed at the Johannesburg World Summit.

25. **International commitments.** In addition to national commitments, the federal government has made many international environmental and sustainable development commitments, including those at Rio de Janeiro, Kyoto, and Johannesburg. A key outcome of the Johannesburg World Summit was the Plan of Implementation, which I feel is of utmost importance to protecting our planet and building a better world.

26. The commitments made in the Johannesburg Plan of Implementation are important for Canadians and all citizens of our planet. They include commitments related to water, oceans, forests, poverty reduction, waste, and the use of chemicals, to name but a few.

27. Last year, in response to the World Summit, I called for the federal government to produce its own concrete action plan addressing what it needs to do to meet its international commitments. Close to a year has passed since the conclusion of the World Summit, and the government has yet to develop such an action plan. The creation of a plan had begun in earnest under the leadership of the Earth Summit 2002 Canadian Secretariat (the body that co-ordinated Canada's preparations for the Johannesburg Summit). A draft short list of priority commitments from the Johannesburg Plan of Implementation was developed together with departmental assignments. But the Secretariat was dissolved on March 31, 2003 and the plan remains incomplete. A committee of deputy ministers has since assumed responsibility for overseeing the development of commitments Canada made at the Johannesburg World Summit. The deputy ministers expect to consider a proposal in their fall meeting. I look forward to seeing this plan and its implementation.

The continuing gap between environmental commitments and actions

28. The federal government has stated that it is managing its fiscal deficit to avoid leaving a burden of debt for future generations. The work of the Commissioner of the Environment and Sustainable Development over the years points to another type of deficit—an environmental and sustainable development deficit. As my observations continue to indicate, a deficit in performance is partly caused by a gap between the commitments the federal government has made and the results it has achieved.

29. Federal commitments—including those in sustainable development strategies, policies, legislation, international agreements, regulations, and guidelines—deal with issues that fundamentally affect our way of life and therefore need active management. Previous reports of the Auditor General and the Commissioner of the Environment and Sustainable Development have noted environmental damage, health impacts, and billions of dollars in costs to Canadians due to inadequate or absence of action on protecting fish stocks, reducing greenhouse gas emissions, poor air and water quality, protection of biodiversity, and the management of toxic substances. Over the coming years I will continue to monitor whether results-based action plans and dedicated resources are being used to reduce the gap between commitments, actions and results.

30. In its 2003 Budget, the federal government made one of its largest commitments to the environment and sustainable development in years—$3 billion over the next five years. Many key areas where the government proposes to spend this money—climate change, air and water quality, contaminated sites on federal lands, management of toxic substances, and species at risk—are subjects that my predecessor and I have audited in the last few years. The government has also set aside funds for the Johannesburg Plan of Implementation and for national parks.

31. This year's Report examines several issues that all highlight to varying degrees the gap between commitments and action. The pesticides chapter raises serious questions about the federal government's failure to keep commitments it made to ensure that pesticides are safe, while allowing for access to them where required. The chapter on urban road transportation puts the government on notice that it will need to significantly improve the way it measures the effects of its programs in order to demonstrate that it is meeting Canada's Kyoto target. The sustainable development chapter looks at federal commitments that impact our communities, employment opportunities, and industries.

32. This Report, the seventh annual Report of the Commissioner, demonstrates the evolution of our audit approaches to sustainable development. I have followed up on ministerial responses to environmental petitions to determine whether commitments made have been translated into commitments met. And I have taken a more focussed look at selected departments' sustainable development commitments to provide a more in-depth picture of the progress being made.

Managing the safety and accessibility of pesticides

33. Chapter 1 examines the extent to which the federal government is effectively managing key aspects of pesticide use in Canada. Pesticide use affects virtually all Canadians. By December 2002, there were 5,622 pest control products registered for use in Canada. Pesticides are used to produce and preserve the food we eat. They are included in paints to stop fungal growth, and are used to control pests—in managing the spread of the West Nile virus, for example. The nature of pesticides makes them a concern. They are designed to be toxic to pests and they are released into the environment deliberately. It is important that Parliament know how the federal government is managing the risks that pesticide use presents, and this is why we have chosen to examine aspects of pesticides management for the fourth time in 15 years.

34. The Pest Management Regulatory Agency of Health Canada is responsible for protecting human health and the environment by minimizing the risks associated with pest control products, while allowing for access to pest management tools. I am troubled that the federal government has been very slow to meet the commitments it has set for itself to manage pesticides and the associated health and environmental risks.

35. Timely evaluations of new pesticides could result in potentially safer products on the market. Despite significant improvements in the rigour and timeliness of the submission process, the Agency does not consistently meet its targets for timely evaluation of new pesticides. Many new pesticides have been granted temporary registration pending the submission of additional studies. Of the new pesticide registrations in 2001–02, 58 percent were temporary. Given that the risks to health and the environment have not been fully evaluated, I am concerned about the frequent and repeated use of temporary registrations.

36. Health and environmental standards relating to pesticide use have risen, but the progress made in re-evaluating older, widely used pesticides has been very slow. All of the pesticides that the government has fully re-evaluated so far have been removed from the market or have had greater restrictions placed on their use because some uses posed significant health and environmental risks. Other re-evaluations (of selected pesticides used on lawn and turf, for example) are behind schedule. Pesticides slated for re-evaluation remain on the market, and it is likely that some of them do not meet today's standards.

37. Despite its commitment to ensure that pest control products are used legally and according to label instructions, the Agency has only limited and unreliable information about the extent to which users are complying with label instructions. A lack of compliance could have environmental impacts and create unnecessary health risks for those exposed to these products.

38. In 1994, the federal government committed to setting up a database on pesticide use. My predecessor and I criticized the government in 1999 and 2002 for not acting on this commitment, and it still has not done so. In the

absence of up-to-date information, the government relies on a variety of incomplete and dated information. As I reported in 2002, Canada remains one of the few member countries of the Organization for Economic Co-operation and Development that lack a database on pesticide use or sales. Information about the amounts of pesticides being used is needed to make good decisions about risks to health, safety, and the environment.

39. Based on my observations, the federal government is not managing pesticides effectively. There are weaknesses in many areas that raise serious questions about the overall management of the health and environmental risks associated with pesticides. The government is not meeting its responsibility to ensure that all pesticides in use meet current standards. Urgent corrective action is needed.

Road transportation in urban areas: accountability for reducing greenhouse gases

40. Chapter 2 examined whether there were appropriate accountability frameworks in place for selected federal programs associated with road transportation in urban areas. Looking forward, these frameworks are crucial for the federal government to be able to report on its progress toward meeting its Kyoto commitment.

41. In December 1997, Canada and 160 other countries negotiated the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Five years later, Canada ratified the Kyoto Protocol. The Protocol commits Canada to reducing its greenhouse gas emissions over the period 2008 to 2012 to 6 percent below 1990 levels—Canada's Kyoto target.

42. To help in this effort, the federal government issued its Action Plan 2000 on Climate Change (October 2000) and its Climate Change Plan for Canada (November 2002). It expects that these two plans together will take Canada about three quarters of the way toward its Kyoto target. The Climate Change Plan outlines a number of current and potential actions that could help Canada address the remaining gap.

43. The federal government expects every government, region, sector, and Canadian to do their share to meet Canada's Kyoto target. It has also indicated that the transportation sector will be expected to assume its share of responsibility for meeting the target. To date, the government has chosen to address greenhouse gas emissions in the transportation sector using a limited number of policy instruments. It has relied on voluntary measures and spending programs focussed mainly on research and development, demonstration, and public education and awareness.

44. The transportation sector is the single largest source of Canada's greenhouse gas emissions, accounting for 26 percent of total emissions in 2001. More than 70 percent of emissions in that sector are generated by road transportation. From 1990 to 2001, greenhouse gas emissions by the transportation sector rose by 22 percent, and emissions by the road transportation sector alone rose by 25 percent. Two thirds of these emissions occur in urban areas, where the majority of Canadians live.

45. Action Plan 2000 and the Climate Change Plan for Canada identify nine actions related to the transportation sector (described in Chapter 2 of this Report, Appendix A) that either build on existing federal government measures or are new measures. All of these actions are expected to be delivered through some form of partnership between the federal government and other levels of government or other stakeholders, or both. The federal government estimates that these actions will account for about 12 percent of the total anticipated reductions in Canada's greenhouse gas emissions.

46. We examined one of the nine actions—the Canadian Transportation Fuel Cell Alliance program, for which Natural Resources Canada is the lead department. (We did not audit the eight other actions because at the time of our examination, they were in the early stages of implementation or did not have a strong focus on urban road transportation.) For the transportation sector as well as other sectors of the Canadian economy, hydrogen and fuel cells potentially have many significant benefits—economic, environmental, and social. However, these benefits depend on both the primary source of fuel and the technology used to produce the hydrogen. Significant challenges remain, including the need to develop both an infrastructure and uniform industry codes and standards.

47. The federal government has invested or committed over $100 million to hydrogen fuel cells without any national strategy to ensure that Canadians would get the maximum benefits for the investment. In my view, the federal government needs to decide what role it will play in addressing the hydrogen and fuel cell challenges and, if appropriate, what long-term commitments are necessary.

48. Given Transport Canada's overall mandate in the transportation sector, we also examined its Moving On Sustainable Transportation program and its Intelligent Transportation Systems initiative. Both were intended to have an impact on road transportation in urban areas and to lead to reductions in Canada's greenhouse gas emissions.

49. All three programs have shortcomings that may prevent them from achieving their long-term expected results. If these shortcomings are not corrected, it will be difficult for the federal government to know the contribution these programs are making to their stated outcomes, which include reducing Canada's greenhouse gas emissions.

50. In June 2003, the federal government tabled in Parliament its first comprehensive report on the Government of Canada's investment in climate change from 1997 to 2002. My predecessor had recommended in his 1998 Report (Chapter 3, Responding to Climate Change—Time to Rethink Canada's Implementation Strategy, paragraph 3.162) that the federal government produce such a report. In its June 2003 report, the government recognizes that achievements are presented mainly as outputs and activities. It also indicates that efforts will be made to state the extent to which these outputs and activities contribute toward meeting Canada's climate change commitments. In my view, such information will be crucial to assist Parliament in its oversight of Canada's response to climate change.

51. The ultimate objective of the United Nations Framework Convention on Climate Change is to stabilize greenhouse gas concentrations in the atmosphere at a level where human actions would not significantly interfere with the climate system. The Intergovernmental Panel on Climate Change has stated that this would require greenhouse gas emissions to be cut by more than half by the end of the 21st century. The Kyoto Protocol is a first step toward that objective.

Sustainable development strategies

52. Chapter 3 reports on selected sustainable development objectives set by Infrastructure Canada, Industry Canada, Human Resources Development Canada, and Environment Canada. Case studies in the chapter show that sustainable development involves important economic, social, and environmental issues that affect Canadians.

53. I continue to notice varying degrees of progress and effort directed toward sustainable development strategy objectives. In my view, stronger central direction and leadership would accelerate Canada's progress in this area.

54. The government committed to improving the environment by targeting at least 47 percent of the $2 billion Infrastructure Canada Program to projects that improve the quality of the environment. The government could not provide evidence to demonstrate how all the projects deemed to be "green" have environmental benefits; as a result, the program is at risk of not being able to meet its stated environmental goal. I believe that when it accounts for and reports on the overall environmental benefits and performance of the Program, Infrastructure Canada needs to demonstrate clearly the environmental benefits associated with the projects it categorizes as green.

55. Industry Canada made commitments to get companies to reduce pollution and use natural resources more wisely in producing goods and providing services to consumers. It has undertaken a significant amount of work and devoted resources to fulfilling this commitment. However, it needs to improve how it measures and reports on the impact its actions are having on Canadian industry.

56. Human Resources Development Canada (HRDC) committed to explore, investigate, and assess issues such as the potential impact of the Kyoto Protocol on Canadian jobs and green employment. I have noted that the public has received conflicting messages about how Kyoto will affect our economy, and I am disappointed at the slow pace of HRDC's progress on its commitment. The decision to ratify Kyoto was a major decision. By not fulfilling its commitment in a timely way, HRDC missed an opportunity to inform Canadians about important employment issues surrounding Kyoto. Without basic information, HRDC will be unable to make the necessary adjustments in its employment and training programs—programs designed to serve Canadians and give them the tools to do their best in today's and tomorrow's economy.

57. Many federal departments are involved in delivering programs at the local level. Environment Canada committed to getting those departments to work together. One Environment Canada target was to complete a federal framework that would spell out what the government is trying to achieve and how to get departments to work together to make communities more sustainable. This framework has the potential to be a roadmap to how the federal government makes our communities better places to live. Work on this framework has been delayed, and there is no firm deadline set for its completion.

Environmental petitions

58. Petitions (see Chapter 4) cover a wide range of local, regional, national, and international concerns and have been received from all over the country. Many continue to come from individuals and local groups concerned about local environmental issues that affect them and their communities.

59. New issues have emerged in this year's petitions. The list of environmental issues covered by petitions expanded this year to include endangered species, contaminated federal lands and harbours (including former military training sites), the environment and trade, the effects of genetically engineered crops on soil, radioactive waste, invasive species, nuclear liability, and the transboundary movement of hazardous waste.

60. This year, I have begun to follow up on some of those commitments and have audited four commitments made by departments in response to previous petitions. Departmental action on fulfilling commitments was mixed. However, in all cases examined, petitioners succeeded in getting some level of action from the federal government on issues that concern them.

61. **The federal government declared trichloroethylene a toxic substance a decade ago, but federal actions were only recently completed.** Although trichloroethylene (TCE) was declared a decade ago to be toxic and probably carcinogenic to humans, Environment Canada only recently finalized control measures for this substance. I highlighted this long delay in my 2002 Report (Chapter 1, Toxic Substances Revisited, Exhibit 1.5). The Department began to develop these regulations in 1997. In its February 2001 response to Petition No. 25, Environment Canada committed to completing the draft regulations and it set a target of mid-2001. While it did succeed in introducing draft regulations, it did so in December 2002 after a further 16-month delay. The final regulations came into force on 24 July 2003.

62. The Canadian Drinking Water Quality Guideline for TCE was established in 1987. It was flagged for review in 1993. However, it was not until May 2000 that Health Canada recommended that the reassessment for TCE begin as soon as possible. The review finally began in earnest in the spring of 2002 and it is now complete (as promised by Health Canada in its response to Petition No. 25). As a result of the review, Health Canada is recommending that the TCE guideline be more stringent. The Department must now work with the provinces and territories to make any final changes

to the guideline. I encourage Health Canada to complete this as quickly as possible.

63. While I appreciate the complexity of putting in place new regulations and guidelines, I am troubled that actions to protect human health and the environment take so long.

64. The Canadian International Development Agency has committed to enhance public access to environmental assessments, but only for certain types of projects. In response to Petition No. 41B, the Agency decided to enhance public access to the environmental assessments it funds for hydro dam projects—only one of various types of infrastructure projects in which CIDA is involved. In what I consider a good suggestion, an internal task force in CIDA recommended that the Agency enhance such access to environmental studies for other types of projects as well.

Conclusion

65. Making commitments to the environment and sustainable development is important; however, meeting them is even more important. As a matter of credibility, Canadians expect the federal government to meet its commitments. The environmental deficit that I referred to in last year's Report will continue to grow unless the government reduces the gap between its commitments and its actions. To reduce the deficit, the federal government must not only live up to its commitments but also be able to measure and report what its actions are achieving. Failure to address commitments will pass an increasing burden to future generations.

66. Our audit work this year has found that the federal government needs to

- actively work to meet commitments it has made to ensure that pesticides are safe, while allowing for access to them where required;
- be able to report the impact its road transportation activities will have toward meeting Canada's Kyoto target; and
- be clear about the results that its sustainable development strategies are achieving.

67. I strongly encourage Canadians to continue to be their own environmental watchdog, to get involved and use the petitions process to help make a difference. I look forward to the continuing success of the petitions process.

68. **Good intentions.** When Canadians invest for tomorrow, they set goals for what they want to achieve and they receive regular statements on the progress of their investments. Should they not expect the same of their government as it invests their money in the environment and sustainable development? I continue to encourage the government to produce such statements so that Parliament and Canadians will be able to know what progress the government is making toward eliminating the environmental deficit.

Appendix *Auditor General Act*—Excerpts

An Act respecting the Office of the Auditor General of Canada and sustainable development monitoring and reporting

INTERPRETATION

Definitions

2. In this Act,

"appropriate Minister"

"appropriate Minister" has the meaning assigned by section 2 of the *Financial Administration Act*;

"category I department"

"category I department" means

(a) any department named in Schedule I to the *Financial Administration Act*,

(b) any department in respect of which a direction has been made under subsection 24(3), and

(c) any department, set out in the schedule;

"Commissioner"

"Commissioner" means the Commissioner of the Environment and Sustainable Development appointed under subsection 15.1(1);

"sustainable development"

"sustainable development" means development that meets the needs of the present without compromising the ability of future generations to meet their own needs;

"sustainable development strategy"

"sustainable development strategy", with respect to a category I department, means the department's objectives, and plans of action, to further sustainable development.

DUTIES

Examination

5. The Auditor General is the auditor of the accounts of Canada, including those relating to the Consolidated Revenue Fund and as such shall make such examinations and inquiries as he considers necessary to enable him to report as required by this Act.

Idem

6. The Auditor General shall examine the several financial statements required by section 64 of the *Financial Administration Act* to be included in the Public Accounts, and any other statement that the President of the Treasury Board or the Minister of Finance may present for audit and shall express his opinion as to whether they present fairly information in accordance with stated accounting policies of the federal government and on a basis consistent with that of the preceding year together with any reservations he may have.

Annual and additional reports to the House of Commons

7. (1) The Auditor General shall report annually to the House of Commons and may make, in addition to any special report made under subsection 8(1) or 19(2) and the Commissioner's report under subsection 23(2), not more than three additional reports in any year to the House of Commons

(a) on the work of his office; and,

(b) on whether, in carrying on the work of his office, he received all the information and explanations he required.

Idem

(2) Each report of the Auditor General under subsection (1) shall call attention to any thing that he considers to be of significance and of a nature that should be brought to the attention of the House of Commons, including any cases in which he has observed that

(a) accounts have not been faithfully and properly maintained or public money has not been fully accounted for or paid, where so required by law, into the Consolidated Revenue Fund;

(b) essential records have not been maintained or the rules and procedures applied have been insufficient to safeguard and control public property, to secure an effective check on the assessment, collection and proper allocation of the revenue and to ensure that expenditures have been made only as authorized;

(c) money has been expended other than for purposes for which it was appropriated by Parliament;

(d) money has been expended without due regard to economy or efficiency;

(e) satisfactory procedures have not been established to measure and report the effectiveness of programs, where such procedures could appropriately and reasonably be implemented; or

(f) money has been expended without due regard to the environmental effects of those expenditures in the context of sustainable development.

STAFF OF THE AUDITOR GENERAL

Appointment of Commissioner

15.1 (1) The Auditor General shall, in accordance with the *Public Service Employment Act*, appoint a senior officer to be called the Commissioner of the Environment and Sustainable Development who shall report directly to the Auditor General.

Commissioner's duties

(2) The Commissioner shall assist the Auditor General in performing the duties of the Auditor General set out in this Act that relate to the environment and sustainable development.

SUSTAINABLE DEVELOPMENT

Purpose

21.1 The purpose of the Commissioner is to provide sustainable development monitoring and reporting on the progress of category I departments towards sustainable development, which is a continually evolving concept based on the integration of social, economic and environmental concerns, and which may be achieved by, among other things,

(a) the integration of the environment and the economy;

(b) protecting the health of Canadians;

(c) protecting ecosystems;

(d) meeting international obligations;

(e) promoting equity;

(f) an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of differ ent environmental and natural resource options;

(g) preventing pollution; and

(h) respect for nature and the needs of future generations.

Petitions received

22. (1) Where the Auditor General receives a petition in writing from a resident of Canada about an environmental matter in the context of sustainable development that is the responsibility of a category I department, the Auditor General shall make a record of the petition and forward the petition within fifteen days after the day on which it is received to the appropriate Minister for the department.

Acknowledgement to be sent

(2) Within fifteen days after the day on which the Minister receives the petition from the Auditor General, the Minister shall send to the person who made the petition an acknowledgement of receipt of the petition and shall send a copy of the acknowledgement to the Auditor General.

Minister to respond

(3) The Minister shall consider the petition and send to the person who made it a reply that responds to it, and shall send a copy of the reply to the Auditor General, within

(a) one hundred and twenty days after the day on which the Minister receives the petition from the Auditor General; or

(b) any longer time, where the Minister personally, within those one hundred and twenty days, notifies the person who made the petition that it is not possible to reply within those one hundred and twenty days and sends a copy of that notification to the Auditor General.

Multiple petitioners

(4) Where the petition is from more that one person, it is sufficient for the Minister to send the acknowledgement and reply, and the notification, if any, to one or more of the petitioners rather than to all of them.

Duty to monitor

23. (1) The Commissioner shall make any examinations and inquiries that the Commissioner considers necessary in order to monitor

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before the House of Commons under section 24; and

(b) the replies by Ministers required by subsection 22(3).

Commissioner's report

(2) The Commissioner shall, on behalf of the Auditor General, report annually to the House of Commons concerning anything that the Commissioner considers should be brought to the attention of that House in relation to environmental and other aspects of sustainable development, including

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before that House under section 24;

(b) the number of petitions recorded as required by subsection 22(1), the subject-matter of the petitions and their status; and

(c) the exercising of the authority of the Governor in Council under any of subsections 24(3)to (5).

Submission and tabling of report

(3) The report required by subsection (2) shall be submitted to the Speaker of the House of Commons and shall be laid before that House by the Speaker on any of the next fifteen days on which that House is sitting after the Speaker receives it.

Strategies to be tabled

24. (1) The appropriate Minister for each category I department shall cause the department to prepare a sustainable development strategy for the department and shall cause the strategy to be laid before the House of Commons

(a) within two years after this subsection comes into force; or

(b) in the case of a department that becomes a category I department on a day after this subsection comes into force, before the earlier of the second anniversary of that day and a day fixed by the Governor in Council pursuant to subsection (4).

Updated strategies to be tabled

(2) The appropriate Minister for the category I department shall cause the department's sustainable development strategy to be updated at least every three years and shall cause each updated strategy to be laid before the House of Commons on any of the next fifteen days on which that House is sitting after the strategy is updated.

Governor in Council direction

(3) The Governor in Council may, on that recommendation of the appropriate Minister for a department not named in Schedule I to the *Financial Administration Act*, direct that the requirements of subsections (1) and (2) apply in respect of the department.

Date fixed by Governor in Council

(4) On the recommendation of the appropriate Minister for a department that be comes a category I department after this subsection comes into force, the Governor in Council may, for the purpose of subsection (1), fix the day before which the sustainable development strategy of the department shall be laid before the House of Commons.

Regulations

(5) The Governor in Council may, on the recommendation of the Minister of the Environment, make regulations prescribing the form in which sustainable development strategies are to be prepared and the information required to be contained in them.

Main Points

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Managing the Safety and Accessibility of Pesticides

Chapter 1 Main Points

1.1 Despite substantial improvements in some areas over the last eight years, the federal government is not adequately ensuring that many pesticides used in Canada meet current standards for protecting health and the quality of the environment. The range of weaknesses we identified raises serious questions about the overall management of the health and environmental risks associated with pesticides.

1.2 The Pest Management Regulatory Agency, a branch of Health Canada, has developed a sound framework for evaluating pesticides, but key elements of the evaluation process need to be strengthened. For example, the Agency needs to use up-to-date evaluation methods; ensure that it has adequate information to complete the evaluations; carefully test its assumptions, especially about user behaviours; and consistently apply its procedures and policies. In particular, we are concerned about the heavy and repeated use of temporary and emergency registrations.

1.3 Health and environmental standards relating to pesticide use have risen, but the progress made in re-evaluating older, widely used pesticides against them has been very slow. All pesticides re-evaluated to date were found to pose significant health or environmental risks, at least for some uses. They were either removed from the market or had greater restrictions placed on their use. It is likely that some pesticides on the market that have not yet been re-evaluated will also fail to meet today's standards.

1.4 If users do not comply with the *Pest Control Products Act* or follow the instructions on pesticide labels, they may risk their health. They may also increase the risk to their families, other people, or the environment. The Agency does not know to what extent pesticide users are complying with the Act and associated regulations. Nor does it know how effective its user compliance programs have been. As a result, it cannot demonstrate that it is meeting its commitments to ensure compliance with the Act.

1.5 Health Canada has done only limited research on the health effects of pesticides despite the federal government's stated priority in this area. Other departments involved in pesticide management are making new efforts to co-ordinate their research and their programs to monitor pesticides, but their efforts need a sharper focus on supporting regulatory decisions.

1.6 Efforts to monitor the health and environmental impacts of pesticides are hampered by a lack of information about their use and adverse effects, by an incomplete set of national guidelines for water quality monitoring, and by a lack of suitable methods to measure pesticides.

1.7 The Pest Management Regulatory Agency is not meeting its targets for evaluating new pesticides. As a result, it is not providing timely access to new, possibly safer, products—a key concern for farmers. However, new measures are being implemented to increase the availability of pesticides for crops grown on small areas of land.

Background and other observations

1.8 The Pest Management Regulatory Agency was created in 1995 as a branch of Health Canada. It has the primary responsibility for regulating pesticides. Other Health Canada branches and other federal departments and agencies, including Agriculture and Agri-Food Canada, the Canadian Food Inspection Agency, Environment Canada, Fisheries and Oceans Canada, and Natural Resources Canada also play important roles in managing pesticides. The federal government shares the responsibility for managing pesticides with provincial, territorial, and in some cases, municipal governments.

1.9 The Pest Management Regulatory Agency faces significant internal challenges. It did not receive the funding it originally expected when it was created and funding has been pieced together from various sources. Funding over the longer term now appears to be more secure. Human resources management will continue to be difficult, as the Agency must now manage and train large numbers of new employees hired to implement the new *Pest Control Products Act*.

1.10 The House of Commons Standing Committee on Agriculture and Agri-Food recommended that we examine the management practices, controls, and reporting systems of the Agency. Parts of this chapter address the Committee's main concerns.

1.11 Prior to this audit, the Office of the Auditor General had examined aspects of federal pesticide management three times over the last fifteen years. In 2002 we reported the results of a follow-up of our 1999 audit of the management of toxic substances.

1.12 In December 2002, the new *Pest Control Products Act* received royal assent. New regulations under the Act and new funding will provide opportunities for the federal government to significantly improve how it manages pesticides. This chapter provides a snapshot of pesticide management against which Parliament can measure the government's progress in this area.

The departments have responded. The departments have generally agreed with our recommendations. Their responses, including the actions they are taking or intend to take to address the recommendations, are set out in the chapter.

Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases

Chapter 2 Main Points

2.1 As part of the Kyoto Protocol, the federal government agreed to reduce Canada's greenhouse gas emissions to six percent below 1990 levels over the period 2008 to 2012. The transportation sector is the single largest source of Canada's greenhouse gas emissions, accounting for 26 percent of total emissions in 2001. Government initiatives to reduce greenhouse gas emissions in the transportation sector are expected to account for about 12 percent of the reduction in Canada's total emissions.

2.2 For the most part, the federal government's actions in the transportation sector to address greenhouse gas emissions through partnership agreements are in the early stages of implementation. Therefore, now is an ideal time to ensure that the accountability provisions for these actions are sound and that improvements can be made where necessary.

2.3 We examined the accountability frameworks in place for three existing federal programs that include expected results for reducing greenhouse gas emissions in the transportation sector. These programs are Transport Canada's Moving On Sustainable Transportation (MOST) program and its Intelligent Transportation Systems (ITS) initiative, and Natural Resources Canada's Canadian Transportation Fuel Cell Alliance (CTFCA) program.

2.4 In general, reasonable accountability frameworks are in place for the programs examined. However, all three programs have shortcomings that may prevent them from achieving their long-term, expected results for reducing emissions. We also found that the ITS projects we examined did not have provisions for reporting on environmental impacts. In addition, a report on the roll-up of project outcomes into overall program results has not been prepared for the MOST program, although a framework for doing so has been developed for phase 2 of the program.

2.5 These concerns, if not corrected, will make it difficult for the federal government to assess the contribution these programs are making to their stated outcomes, including reducing Canada's greenhouse gas emissions.

2.6 All of the federal government's actions under Action Plan 2000 and the Climate Change Plan for Canada to reduce greenhouse gas emissions in the transportation sector involve partnering with other levels of government or other stakeholders. Therefore, it is critical that the federal government develop partnership agreements with a strong accountability framework, and that all partners, including the federal government, be held to account for achieving their stated performance expectations.

Background and other observations

2.7 Over 70 percent of Canada's greenhouse gas emissions from transportation are generated by road transportation, with the majority occurring in urban areas where most Canadians live. Greenhouse gas emissions from road transportation rose by more than 25 percent from 1990 to 2001.

2.8 In Canada, the federal, provincial, and municipal governments share the responsibility for transportation. Although urban transportation is not a federal responsibility, it has an impact on several areas of federal interest, such as health, the economy, and the environment.

2.9 The increasing demands for transportation are leading to trends that are not sustainable. Reducing emissions from transportation represents both a major challenge and an important opportunity. Many of the actions that could be adopted in transportation may generate multiple benefits that go beyond reducing greenhouse gas emissions. These benefits include cleaner air, improved health, more efficient transportation systems, and reduced congestion—all of which make our cities healthier and more sustainable.

2.10 Individual Canadians generate about half of their greenhouse gas emissions from personal road transportation, and the government expects every Canadian to reduce his or her emissions by 20 percent. Programs focussed on promoting education and awareness to change people's transportation behaviour are an integral part of the federal government's strategy to reduce greenhouse gas emissions.

2.11 Tools such as intelligent transportation systems and new technologies being developed are an important part of the solution. Although the technology of fuel cells using hydrogen is promising, the estimated net reduction in greenhouse gas emissions represents a very small portion of the transportation sector's projected emissions through to 2020.

2.12 It is important that Transport Canada's 2003–2005 sustainable development strategy reflect the vision contained in its strategic document *Straight Ahead—A Vision for Transportation in Canada* so that there is a clear and consistent picture of the results that the Department and the federal government, as a whole, want to achieve in the area of sustainable transportation.

Transport Canada has responded. Transport Canada has generally accepted our recommendations. Its responses indicate what it is doing, or plans to do, to address them.

Sustainable Development Strategies: Case Studies

Chapter 3 Main Points

3.1 The federal government has made many commitments on the environment and sustainable development. Making these commitments is one thing but achieving and measuring results is another. In this report, we looked at four federal departments to see if they were making progress on commitments they made to Parliament in their 2001 sustainable development strategies. These strategies are important tools that represent the objectives and action plans of departments and agencies for furthering sustainable development.

3.2 Our first case study looks at "green" funding as part of Infrastructure Canada's $2 billion Infrastructure Canada Program. The government intended that at least 47 percent of its funding to this Program would be directed to infrastructure that will improve the environment. Tangible environmental benefits are expected to be achieved before the Program ends. We found that many of the green projects related to potable water that are funded by the program do not have clearly defined environmental benefits. As a result, accounting for these projects as green overstates the portion of funding allocated to improving the quality of the environment. We also found that the expected or actual environmental benefits of the Program have yet to be reported to Parliament.

3.3 Two commitments made by Industry Canada that deal with eco-efficiency and environmental technologies form the second case study. These commitments are about how companies produce goods and services in a sustainable manner and how consumers use them; they are about producing less pollution and using natural resources more wisely. Industry Canada is meeting its commitments, producing a variety of information products, and providing investments to support projects in these areas. It has put in place a system to track the status of its commitments and reports on progress to senior management on a regular basis. The Department needs to improve how it measures and reports on the impact its actions are having on making Canadian industries more sustainable.

3.4 The third case study is on Human Resources Development Canada (HRDC). The Department made commitments related to the impact the Kyoto Protocol to the United-Nations Framework Convention on Climate Change will have on Canadian jobs, green employment, and the skills and knowledge required to make Canada a more sustainable society. HRDC has made limited progress on its commitments and has not put in place an effective performance measurement framework to track its own progress. This

indicates to us that the Department attaches low priority to the objective. Delays prevent Canadians from getting answers to important questions regarding sustainable development and employment issues. Lack of progress also means the Department is not identifying opportunities for changing or adjusting its existing policies and programs to further sustainable development.

3.5 Environment Canada's commitment to improve the integration of federal government programs at the community level is the fourth and final case study. A key target in this regard is the development and implementation of a federal framework that would set out the federal government's vision and strategy for making communities more sustainable. The Department will not meet this commitment by the end of its target completion date of 2003 and has not set a new deadline. Without this framework, it will not be clear where the federal government is heading in terms of helping Canadian communities become more sustainable. The Department is not managing its objective in an effective manner. Improved reporting is needed so Parliament and Canadians can know whether communities are, in fact, benefiting from better integrated programs.

Background and other observations

3.6 These case studies reveal how departments are addressing environment and sustainable development issues and the progress they are making. This includes how they are setting objectives and performance expectations, the rate at which they are implementing commitments, and how they are measuring and reporting on performance.

3.7 The case studies illustrate that sustainable development is not just about the environment, but involves important social and economic issues as well. The case studies also show that sustainable development is not just the responsibility of Environment Canada but involves all federal departments including those with social and economic mandates.

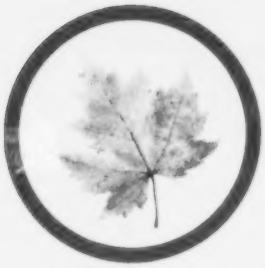
3.8 In 1995, Parliament passed amendments to the *Auditor General Act*, creating a legal requirement that the ministers and heads of 25 government departments and agencies prepare sustainable development strategies and update them at least every three years. An additional four federal organizations have voluntarily produced sustainable development strategies. The first strategies were released in December 1997, followed by a second round in February 2001.

3.9 Amendments to the *Auditor General Act* also created the position of Commissioner of the Environment and Sustainable Development. The Commissioner monitors and reports on the progress of departments and agencies toward sustainable development. The Commissioner also reports on how well federal departments and agencies are meeting the objectives and implementing the plans set out in their sustainable development strategies.

3.10 Because our observations deal with selected objectives they should not be applied to other related issues or used as a basis for drawing conclusions about overall progress toward sustainable development by the federal

government as a whole. They should also not be used to draw conclusions about matters not examined.

The departments have responded. Infrastructure Canada, Industry Canada and Environment Canada have accepted our recommendations. Human Resources Development Canada generally agrees with our recommendation. The responses of each department, which follow the recommendations in the chapter, indicate what they plan to do.



Environmental Petitions

Chapter 4 Main Points

4.1 Our audits of actions taken by departments on commitments made in four responses to petitions found inconsistent results. On the one hand, we found that some challenging commitments were fulfilled by departments. On the other hand, what might be seen as relatively simple policy and procedural changes were poorly implemented.

4.2 Specifically, in the four audits we found the following:

- Environment Canada met its commitment to develop a regulation for the toxic substance trichloroethylene, albeit later than its target date, and 10 years after the substance was declared toxic. Health Canada has met its commitment to review the Canadian Drinking Water Quality Guideline for trichloroethylene and is recommending a tightening of the guideline.
- Environment Canada has substantially met its commitment to assure itself that a pulp mill in Manitoba is in compliance with regulatory discharge limits and environmental effects monitoring requirements.
- Fisheries and Oceans Canada has not met its commitment: it has failed to take the first steps crucial to implementing a new policy to notify project proponents about public access requirements under the *Canadian Environmental Assessment Act*.
- The Canadian International Development Agency has not met its commitment: it has not fully implemented a new requirement designed to enhance public access to and public participation in environmental studies it funds for proposed hydro dam projects outside of Canada.

Fisheries and Oceans Canada and the Canadian International Development Agency have responded. Both departments have accepted our recommendations to implement their petition commitments. Their responses, which follow the recommendations in the chapter, indicate the actions they intend to take and when these will be complete.

4.3 We have seen a number of positive developments in environmental petitions in the past year:

- The number of petitions continues to grow (up from 28 last year to 38 this year).
- The variety and range of issues being addressed by Canadians using the petitions process has expanded to include topics such as endangered species, wind energy projects, contaminated harbours, strategic environmental assessment, nuclear liability, and military training areas.

- New types of petitioners are using the process: members of provincial legislatures and elementary and university students.
- Petitioners are using the process again to follow up on the responses they have received.
- Late responses by Fisheries and Oceans Canada and Environment Canada are no longer an issue.
- Parliamentary interest in the petitions process has increased.

4.4 This year, all but a few petition replies clearly responded to petitioners' concerns and requests.

4.5 Ministers and departments are taking advantage of the opportunities presented by the petitions process. They have used their petition responses as a platform to clarify federal policies and positions and to explain their role and involvement in an issue. In some cases, they have pledged to take action in response to petitions and have announced new policies or requirements. They have also initiated a research study and launched investigations.

Background and other observations

4.6 The environmental petitions process was established under the *Auditor General Act* in 1995. The Commissioner co-ordinates the petitions process on behalf of the Auditor General. Through the environmental petitions process, Parliament has provided Canadians with a tool to ask questions about and to receive authoritative answers to environmental concerns that involve the federal government.

4.7 The full text of petitions and responses can be found in the petitions catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf/english).

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2003

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2003

Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 1

Managing the Safety and Accessibility of Pesticides

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Office of the Auditor General of Canada

Making a difference . . . for 125 years

In 2003, the Office marks the 125th anniversary of the appointment of the first independent Auditor General of Canada. Both sides of the House of Commons cheered when the Government of Alexander Mackenzie proposed the 1878 bill that would "free the auditing of Public Accounts from any interference on the part of the administration." That enlightened legislation laid the groundwork for 125 years of dedicated service to Parliament and to Canadians.

The 2003 Report of the Commissioner of the Environment and Sustainable Development comprises four chapters and The Commissioner's Perspective—2003. The main table of contents is found at the end of this publication.

This report is available on our Web site at www.oag-bvg.gc.ca.

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Chapter

1

Managing the Safety and Accessibility of Pesticides

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by the Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

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Managing the Safety and Accessibility of Pesticides

Main Points

1.1 Despite substantial improvements in some areas over the last eight years, the federal government is not adequately ensuring that many pesticides used in Canada meet current standards for protecting health and the quality of the environment. The range of weaknesses we identified raises serious questions about the overall management of the health and environmental risks associated with pesticides.

1.2 The Pest Management Regulatory Agency, a branch of Health Canada, has developed a sound framework for evaluating pesticides, but key elements of the evaluation process need to be strengthened. For example, the Agency needs to use up-to-date evaluation methods; ensure that it has adequate information to complete the evaluations; carefully test its assumptions, especially about user behaviours; and consistently apply its procedures and policies. In particular, we are concerned about the heavy and repeated use of temporary and emergency registrations.

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Background and other observations

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1.9 The Pest Management Regulatory Agency faces significant internal challenges. It did not receive the funding it originally expected when it was created and funding has been pieced together from various sources. Funding over the longer term now appears to be more secure. Human resources management will continue to be difficult, as the Agency must now manage and train large numbers of new employees hired to implement the new *Pest Control Products Act*.

1.10 The House of Commons Standing Committee on Agriculture and Agri-Food recommended that we examine the management practices, controls, and reporting systems of the Agency. Parts of this chapter address the Committee's main concerns.

1.11 Prior to this audit, the Office of the Auditor General had examined aspects of federal pesticide management three times over the last fifteen years. In 2002 we reported the results of a follow-up of our 1999 audit of the management of toxic substances.

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The departments have responded. The departments have generally agreed with our recommendations. Their responses, including the actions they are taking or intend to take to address the recommendations, are set out in the chapter.

Introduction

Pesticide use affects almost all Canadians

1.13 Pesticides are used to produce and preserve the food Canadians eat. People rely on pesticides in house paint to stop mildew. Homeowners use pesticides to control weeds in their lawns, insects in their gardens and homes, and parasites on pets.

Pesticide or pest control product—A product, organism, or substance that is used to control, destroy, attract, or repel a pest, or to lessen or prevent its harmful or troublesome effects. For brevity, we have referred to such products as pesticides in this chapter.

1.14 Pesticide use in Canada has been controversial for over 40 years and the subject of difficult policy decisions, such as how to manage the West Nile virus (Exhibit 1.1). The federal government plays a crucial role in determining which pesticides can be used in Canada and contributes to setting the conditions of where and how they can be used.

1.15 **Debates over risks.** The controversies stem, in part, from the facts that most pesticides are designed to be toxic to pests and are deliberately released into the environment. People may be unaware that they are exposed to pesticides. The possible health and environmental impacts may be delayed—in some cases, for decades—and some people, especially children, may be particularly susceptible.

Exhibit 1.1 **Choosing pesticides to control the West Nile virus**

People across Canada are facing the possibility that they may contract the West Nile virus, a disease that can be incapacitating or deadly for a small proportion of people infected. Public health officials, municipalities, provinces, and federal agencies have to make some difficult decisions about how to deal with the virus. For example, insecticides can be used to kill the mosquitoes that transmit the disease to people and birds, yet some of the insecticides carry their own risks. Other options also pose risks.

The alternatives include:

Malathion. First registered in Canada in 1953, this organophosphate pesticide can be used to kill adult mosquitoes. It is highly toxic to insects and fish, and in high concentrations can affect people's nervous systems. Malathion is supposed to be fully re-evaluated by the federal Pest Management Regulatory Agency to ensure that the directions for use are consistent with current standards. The Agency completed an accelerated re-evaluation of the use of malathion on adult mosquitoes in early 2003. As a result of the re-evaluation, it has increased the restrictions on how malathion can be used.

Bacillus thuringiensis israelensis. Found naturally in soil, this bacterium has been used since 1982 to control mosquitoes and black flies. It kills mosquito larvae when ingested and is relatively non-toxic to most animals, including people. It may be more costly than other methods.

DEET (N,N-diethyl-m-toluamide). Also regulated by the Agency, this substance repels mosquitoes, rather than killing them. The Agency began a re-evaluation of DEET in 1990, and completed it in April 2002. As a result of the re-evaluation, the Agency has substantially restricted the use of DEET, especially for younger children. It may irritate the eyes and skin, and in rare cases, cause neurotoxic effects.

Pesticides can be used to kill or repel mosquitoes that may carry the West Nile virus.

Photo: Agricultural Research Service, United States Department of Agriculture

"Natural" insect repellents. Repellents such as oil of citronella are also regulated by the federal government. Oil of citronella contains a substance that scientists believe to be a human carcinogen.

Source: Based on information from the Pest Management Regulatory Agency

Pesticides may be sprayed from the air to control insect pests in forests.

Photo: Canadian Forest Service, Natural Resources Canada

1.16 Canadians are asking questions such as these:

- Do pesticides increase the risk of cancer?
- What are the long-term impacts on bird and fish populations?
- What are the health hazards associated with using pesticides on our lawns?
- Are there harmful residues in foods and what are the long-term effects?
- How should decisions be made about which pesticides are used in Canada?

1.17 **Pesticides also deliver benefits.** Statistics Canada estimates that Canadian farmers spent about $1.5 billion on pesticides in 2000. Some farmers consider pesticides as essential tools to prevent the substantial damage inflicted by weeds, insects, and disease (Exhibit 1.2). In the forest industry, pesticides are used to control insect pests, such as the spruce budworm, or to eliminate deciduous trees and shrubs for improved growth of coniferous forests. In aquaculture, they are used to control sea lice—parasites which scar salmon and reduce their market value.

Exhibit 1.2 **Pesticide use in Canada**

Total land area in crops in Canada in 2000: 36.4 million hectares.

- Treated with herbicides: 25.9 million hectares.
- Treated with insecticides: 2.2 million hectares.
- Treated with fungicides: 2.6 million hectares.

Area of agricultural land treated with pesticides in 1970: less than 10 million hectares.

Total forest area in Canada managed for timber production in 2000: 119 million hectares.

- Treated with herbicides: 0.18 million hectares.
- Treated with insecticides: 0.21 million hectares.

Percentage of Toronto households with lawns that used pesticides outdoors in 2001 or 2002, as estimated in a study commissioned by the Toronto public health department: 38%

Source: Statistics Canada, Natural Resources Canada, and Toronto Public Health

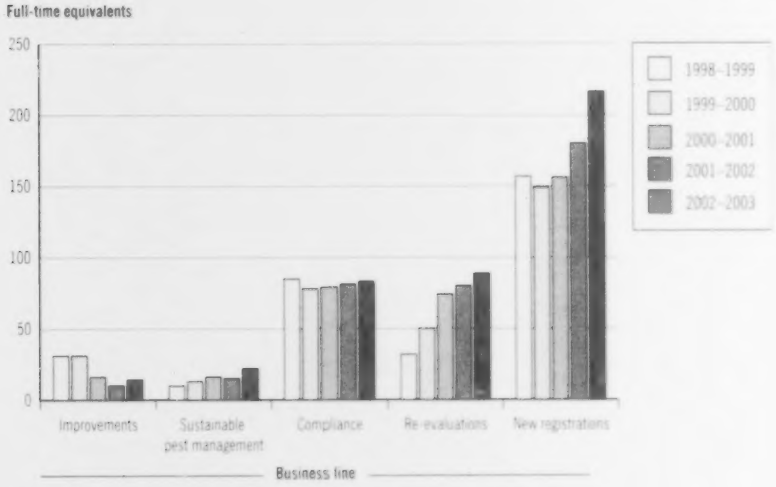
The federal government's approach to managing pesticides has evolved

1.18 Early Canadian legislation was designed primarily to avoid fraud in the descriptions of pesticides. By 1969, the legislative emphasis had shifted toward health and environmental protection.

1.19 Before 1995, pesticide regulation in Canada was the responsibility of Agriculture and Agri-Food Canada, which relied on advice from Environment Canada, Health Canada, Natural Resources Canada, and Fisheries and Oceans Canada. Following a review of pest management in 1989–90, the federal government created a new organization, the Pest Management Regulatory Agency, which was set up as a branch of Health Canada in 1995.

1.20 The Agency spent an estimated $38.7 million in 2002–03 and had the equivalent of 424 full-time employees distributed among five business lines (Exhibit 1.3). The objective of the Agency is to protect human health and the environment by minimizing the risks associated with pest control products.

Exhibit 1.3 **Staffing the major business lines at the Pest Management Regulatory Agency**



Source: Based on information from the Pest Management Regulatory Agency

1.21 In December 2002, Parliament passed the revised *Pest Control Products Act*. The new Act gave the Agency additional responsibilities, such as supporting greater public access to information on pesticides. The Agency's funding is intended to increase over the next few years.

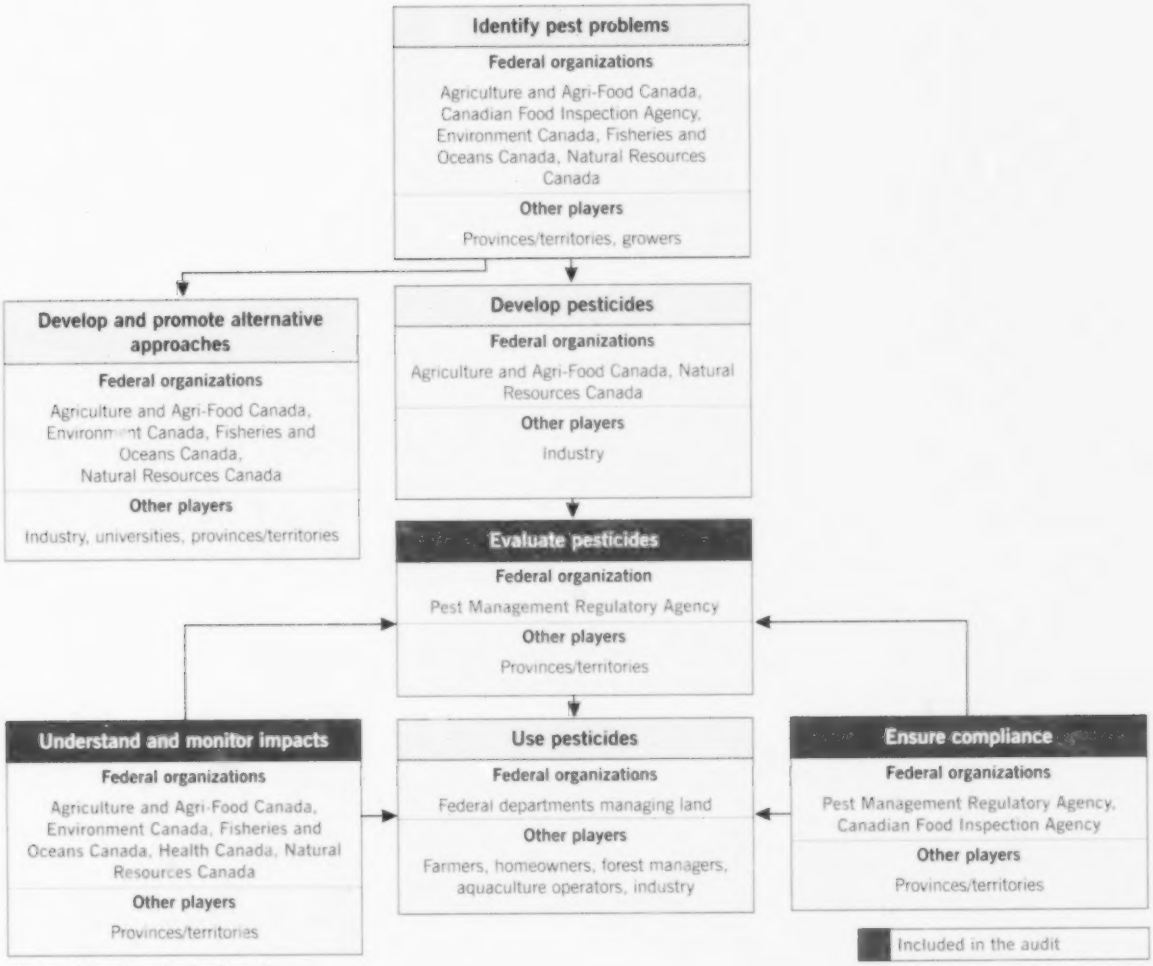
Responsibility for managing pesticides is shared

1.22 Other federal departments and the rest of Health Canada contribute to managing pests in Canada (Exhibit 1.4). For example, Natural Resources Canada has conducted research on biological pesticides for controlling forest insect pests. Agriculture and Agri-Food Canada has developed crop varieties that are more resistant to pests.

1.23 Several departments are also involved in managing pesticides, one of the key tools used to control pests. Health Canada has funded programs that encourage homeowners to use pesticides in smaller amounts. Scientists at Environment Canada and Fisheries and Oceans Canada research the environmental impacts of pesticides, including in oceans, rivers, and lakes. The Canadian Food Inspection Agency monitors pesticide residues on food and enforces the required standards.

1.24 The federal government shares the responsibility for managing pesticides with provincial, territorial, and in some cases, municipal governments.

Exhibit 1.4 **How pests are managed**



Source: Office of the Auditor General

Focus of the audit

1.25 Our objective was to determine to what extent the federal government—primarily through the Pest Management Regulatory Agency—is effective in managing key aspects of pesticide use in Canada. This audit focussed on some of the critical roles the federal government plays:

- evaluating new pesticides to ensure that they meet current standards;
- re-evaluating old pesticides against current standards;
- providing timely access to new, possibly safer, pesticides;
- ensuring compliance with the legislation and other legal requirements; and

- understanding the impacts of pesticides through research and monitoring.

We also examined some of the Agency's internal management issues, and commented on the move to managing pests sustainably.

1.26 The audit built on previous work of this Office. In 1988 we assessed how well the Food Production and Inspection Branch of the Department of Agriculture was managing pesticides. In 1999 we looked at how the federal government managed toxic substances and discussed some aspects of pesticide management. In 2002 we reported on the progress federal departments had made in implementing our 1999 recommendations. This chapter provides an update on some of those recommendations.

1.27 After we started this audit, the House of Commons Standing Committee on Agriculture and Agri-Food recommended that the Auditor General conduct a value-for-money audit of the Pest Management Regulatory Agency to examine its management practices, controls, and reporting systems. Parts of this chapter address the Committee's main concerns.

1.28 We did not examine the impact the new *Pest Control Products Act* will have on pesticide management because we had finished our audit when the regulations that will shape the Act's implementation were being drafted. Further details on the objectives, scope, approach, and criteria are provided in About the Audit at the end of the chapter.

Observations and Recommendations

Evaluating new pesticides

1.29 To determine if the Pest Management Regulatory Agency is adequately ensuring the safety of pesticides, we examined how it evaluates pesticides (Exhibit 1.5). The Agency draws on scientific studies to predict the effectiveness of pesticides and their risks to health and the environment. Pesticide risk evaluation includes determining whether the risks are acceptable; it relies on the expertise and judgment of the Agency's scientists and managers. The evaluation of new pesticides before they are sold or used in Canada is similar to that of old pesticides that need to be re-evaluated against current standards. The evaluation process ends with the approval of the pesticide label, which describes the pesticide's hazards and its proper use.

Label The product label that is approved as part of the registration process contains the conditions of registration that, along with the *Pest Control Products Act* and Regulations, govern the use of the product.

1.30 We examined four aspects of new pesticide evaluation: the Agency's decision-making framework, the information required to do the evaluations, the implications of various assumptions used in predicting risks, and the consistency with which the process is followed.

The Agency has a sound, evolving framework for evaluating pesticides

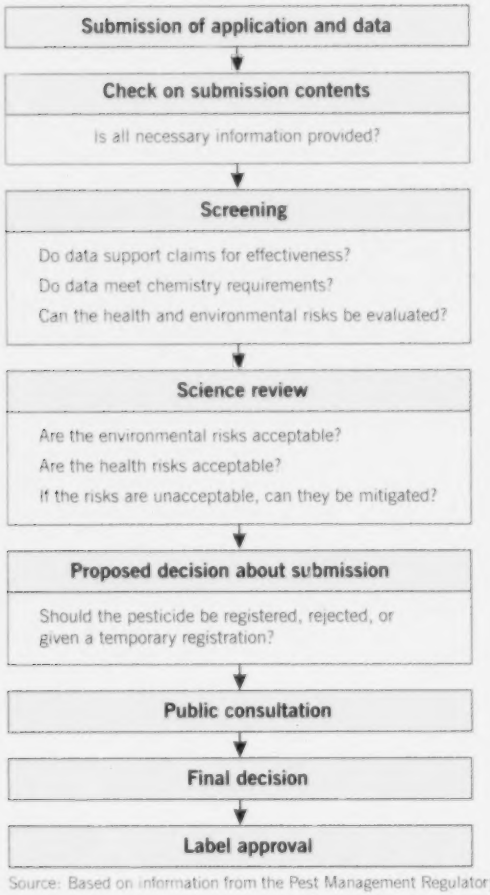
1.31 Since its creation, the Pest Management Regulatory Agency has established increasingly systematic and well-documented steps for its evaluators to follow. The process includes internal reviews and the use of multidisciplinary teams to integrate the different parts of the evaluation.

The Agency's process is similar to those of pesticide regulators in the United States and other countries of the Organisation for Economic Co-operation and Development (OECD). Its standards and tests to determine whether risks to health and the environment are acceptable are generally consistent with international standards.

1.32 Agency evaluators also review information on how effective pesticides are in controlling pests. This review provides assurance to buyers that the product will work as claimed. Evaluators may also determine if using less pesticide would still be effective—which would reduce the health and environmental risks and application costs. Pesticide regulators in most other OECD countries conduct similar reviews.

1.33 **Evolving requirements and methods.** The Agency's tests and standards for pesticide safety continue to evolve. For example, it is working on risk assessment methods that recognize that different people or animals may be exposed to pesticides at different levels. Working with regulators in

Exhibit 1.5 **How pesticides are evaluated**


Submission of application and data
Check on submission contents
Is all necessary information provided?
Screening
Do data support claims for effectiveness?
Do data meet chemistry requirements?
Can the health and environmental risks be evaluated?
Science review
Are the environmental risks acceptable?
Are the health risks acceptable?
If the risks are unacceptable, can they be mitigated?
Proposed decision about submission
Should the pesticide be registered, rejected, or given a temporary registration?
Public consultation
Final decision
Label approval

Source: Based on information from the Pest Management Regulatory Agency

other countries, the Agency is developing methods to evaluate substances with potential long-term impacts on the endocrine systems of animals. These substances include pesticides used currently, such as atrazine, and others removed from the market, such as DDT.

1.34 **Changes driven by U.S. requirements.** One of the most important drivers of change in Canada has been the evolving regulatory approaches used in the U.S. For example, the U.S. requires that the aggregate effects of a pesticide from various sources be assessed along with the cumulative effect of different pesticides that act in the same way. These requirements have been included in Canada's new *Pest Control Products Act*. The Agency has relied on the U.S. Environmental Protection Agency to develop methods of doing these assessments.

1.35 **Slow progress on new methods.** Developing new evaluation methods and adapting methods from other countries compete with other day-to-day demands on the Agency, especially the evaluation of submissions on new pesticides, which are a priority. As a result, its work on developing and adapting new methods—to predict pesticide levels in drinking water sources, for example—has slipped. The Agency needs to make a sustained effort to ensure that its framework is consistent with current scientific understanding and new regulatory requirements. Because of competing demands and limited resources, it has experienced difficulty doing this.

Some pesticides are approved based on inadequate information

1.36 **Limited assurance of information quality.** The Agency's policy is that applicants are to provide a complete package of information on a pesticide before the evaluation starts. This information can be extensive—one submission included 175 binders of information. For studies such as toxicological assessments, potential registrants are to provide results generated by laboratories that are inspected periodically by an independent body. We noted several examples where studies meeting such quality standards were not provided. Other studies, such as those on pesticide effectiveness, are not subject to any independent checks on quality control. Such checks can help prevent cases like the 1976 discovery by the U.S. Environmental Protection Agency that background studies for over 100 pesticide registrations in the U.S. and Canada were invalid and had to be done again.

Registrant—An organization or individual that holds the certificate of registration and is thereby responsible for the product.

1.37 **Heavy use of temporary registrations.** Based on the available information, the Agency's evaluators may conclude that there are still scientific uncertainties or inconsistencies and gaps in information. Senior managers may be willing to approve the temporary use of the pesticide pending the submission of further studies. Of new pesticide registrations in 2001–02, 58 percent were temporary. For some temporary registrations, the missing information was to have been included with the original submission. Examples of information gaps at the time of temporary registration include what happens to the pesticide after it is released into the environment, what impact it is likely to have on children's central nervous systems, and how toxic it is to invertebrates and non-target plants. As a result, many pesticides

are used before they have been evaluated fully against current health and environmental standards. Evaluators may make conservative assumptions to substitute for missing information—as a result, their decisions may be unnecessarily restrictive.

1.38 Regulations under the *Pest Control Products Act* stipulate that temporary registrations may be approved for up to a year. Yet over the last six years, more than 370 temporary registrations were extended and, in most cases, more than once—some up to five times. This further prolonged the use of products whose risks had not been precisely assessed.

1.39 We are concerned that incomplete and potentially unreliable information resulting in temporary registrations may increase the risks to Canadians and their environment. Inadequate information also means that evaluation decisions are more subjective and may rely on assumptions and non-scientific considerations, such as the Agency's perception of the need for the product.

Key assumptions are not tested and some are not correct

1.40 **Effects of assumptions not analyzed.** Agency evaluators must make a series of assumptions to link the laboratory studies they receive to the possible impacts of the pesticide's use (Exhibit 1.6). Such assumptions include how large a crop area will be treated, how much treated food Canadians will eat, and how the pesticide will be applied. These assumptions are often conservative—they tend to overestimate the risks. However, despite the uncertainties in all of the different assumptions evaluators make, we found that they have not determined how reliable their predictions of the risks are. For example, evaluators have not tried systematically altering their assumptions slightly to see if that would reverse the decision to approve a pesticide.

Exhibit 1.6 **Applying safety factors**

The approximate calculation of the acceptable risk level for people is the following:

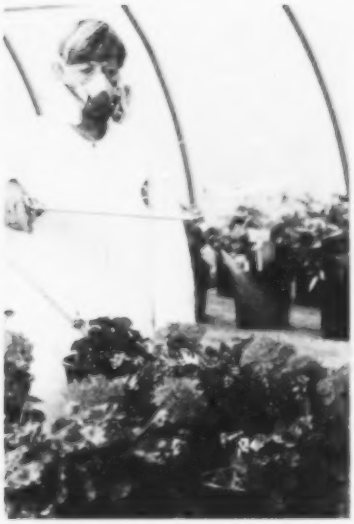
Acceptable risk level for people = No-effect level for test animals X Factor for differences among species X Factor for differences among people X Other factors

Since toxicology studies are done on animals such as mice, rats, and dogs, evaluators use "safety factors" to adjust for differences between humans and other species, and differences in sensitivity among people. Each of these two factors has been estimated to be ten. Additional factors may be applied to compensate for possible impacts on children, inadequate data, or impacts on endocrine systems.

A recent U.S. study published by the Centers for Disease Control and Prevention illustrated the importance of such factors. It reported that children consistently had higher levels of organophosphate pesticide metabolites in their urine than adults. The levels excreted by children varied by more than ten times.

For the environmental impacts on other animals, such as birds or fish, no comparable safety factors are applied. As a result, people receive a relatively higher level of protection than other animals.

Source: Based on information from the Pest Management Regulatory Agency



Pesticide labels may require users to wear protective equipment such as respirators, gloves, and coveralls to lessen adverse health effects.

Photo: Agricultural Research Service, United States Department of Agriculture

Spraying equipment requires calibration between applications of different pesticides to ensure that the application is done according to the label.

Photo: Valérie Chabot, La coopérative fédérée de Québec

1.41 Predictions not checked. When the health or environmental risks of a pesticide are considered unacceptable, evaluators try to identify measures that could reduce the predicted risks to an acceptable level. For example, a pesticide label could require workers who handle the pesticide to wear protective equipment such as respirators or coveralls. It could also require a buffer between the treated area and fish habitat. Evaluators have to predict whether such mitigation measures will prevent or minimize the impacts of pesticides, but the Agency and other federal departments do very little follow-up to determine whether the measures, when implemented, actually reduce the risks to acceptable levels.

1.42 In several cases, the measures listed on pesticide labels, even if followed, appear not to have been enough to prevent environmental damage. For example, in Prince Edward Island more than 20 instances of fish kills since 1994 have been attributed to pesticides, with up to 35,000 dead fish collected in each incident. In British Columbia, birds of prey were killed after granular pesticides were used, even though the label instructions had been followed correctly. These examples illustrate the importance of systematic follow-up on the success of mitigation measures.

1.43 Unrealistic assumptions about user behaviour. Agency staff also assume that pesticide users will follow label instructions, although the Agency's own compliance reports show that they may not. Other studies have documented only partial compliance with requirements to use personal protective equipment. An unrealistic assumption of full compliance means that evaluators are underestimating the risks of pesticide use—by how much is not clear, because the actual impacts of users' practices are not checked.

1.44 Similarly, when evaluators predict occupational exposure to pesticides and pesticide residues on food, they assume that all agricultural users will follow good practices. The available evidence suggests otherwise. For example, a 2001 survey of farmers by Statistics Canada concluded that only 14 percent calibrate their pesticide spraying equipment between applications of different pesticides. Thus, the amounts they actually use on their crops may be higher or lower than the levels specified on the label.

1.45 The underestimation of health and environmental risks may be countered by conservative assumptions at other steps in the risk assessment. However, unless evaluators check the validity of their predictions more systematically, they cannot project the final result with precision.

The Agency does not consistently apply its evaluation framework

1.46 Steps are not always followed. Although the Agency's process for evaluating pesticides is well defined, its staff do not always follow the required steps. We reviewed files on 30 recent submissions. They included those that were processed most quickly and those that took the longest to process. We found that in more than half, evaluators expedited the submission, skipped screening steps, cut the scientific review short, or skipped the public consultation stage. While we recognize that any evaluation process needs some flexibility, we are concerned that there are no clear criteria for these decisions to alter the normal process. In addition, some of these files lacked

documentation of senior management's approval to exclude required steps. Besides the inconsistent treatment of submissions in such cases, steps skipped could mean health or environmental risks were not considered fully.

1.47 In one case, to meet demands for alternatives to pressure-treated wood, the scientific review stage of the submission was completed in 17 calendar days rather than the 550 days the Agency would normally have allowed. During this stage the Agency was supposed to evaluate at least 75 different scientific studies related to this product, weigh their results, and determine whether the risks were acceptable. In this case, screening was skipped, the scientific review was incomplete, and the product was issued a temporary registration.

1.48 Repeated use of emergency registrations. We found that the Agency has also not followed its procedures for emergency registrations. At the request of a province or territory, the Agency may approve the emergency use of a pesticide for one year or less. For a sample of 17 emergency registrations granted in 2002–03, we found that 9 were repeat requests to extend the use beyond one year, and 5 of them had been repeated three times or more. The Agency's regulatory directive on emergency registrations states that a request for a third year of emergency use normally will not be considered. We are concerned that repeated emergency registrations may be a disincentive to use the normal, more detailed, pesticide submission and evaluation processes.

1.49 Overall, safeguards need to be strengthened. Agency evaluators reject about 22 percent of the applications they receive for new pesticides, reduce the number of proposed uses and planned application rates, and require additional measures to protect people and the environment. All these measures reduce the potential risks to Canadians and their environment. And regulations under the new legislation provide an opportunity to implement additional safeguards. In our view, however, the Agency needs to address the weaknesses described above to ensure that pesticides that are being evaluated meet today's standards.

1.50 Recommendation. To ensure that pesticides meet today's environmental and health standards, the Agency should continue to strengthen its pesticide evaluations. In particular, it should ensure that data are complete and reliable, ensure that assumptions are realistic and tested, and follow its own evaluation policies and procedures more systematically.

Department's response. Agreed and implemented.

The Pest Management Regulatory Agency (PMRA) is the only pesticide regulatory agency within the Organisation for Economic Co-operation and Development that does such a detailed preliminary review for deficiency to ensure reviewability of submissions before proceeding to detailed evaluation. Procedures for pre-screening and preliminary science reviews of data have been rigorously implemented for each submission type. Deficiencies are identified and must be addressed by registrants prior to implementation of full review of submission. No further strengthening is required.

Assumptions are an essential component of a pre-market assessment program. Measurement and monitoring are obviously not options for products

that have not yet been approved for use. The Agency recognizes the need to ensure that these assumptions are well founded in predictive science and internationally established practices. Whenever possible, these assumptions have been tested. The approaches used by the Agency for risk assessment are those used internationally.

The Agency considers scientifically-based modifications from evaluation policies and procedures to be warranted in some cases, but these are limited to scientifically-justifiable circumstances, and are subject to approval by relevant committees in the PMRA.

Actions being taken:

Working in co-operation with the international community, the Agency will continue to identify candidate assumptions for testing and will schedule such tests as resources become available.

The Agency will reassess the adequacy of its procedures on submission screening and early stages of the review processes to ensure that the submitted data are complete and reliable.

The Agency will review and, if necessary, enhance the procedures of the Management of Submission Policy to ensure that deviations from the norm are approved and documented.

Re-evaluating old pesticides

The Agency manages a legacy of older pesticides

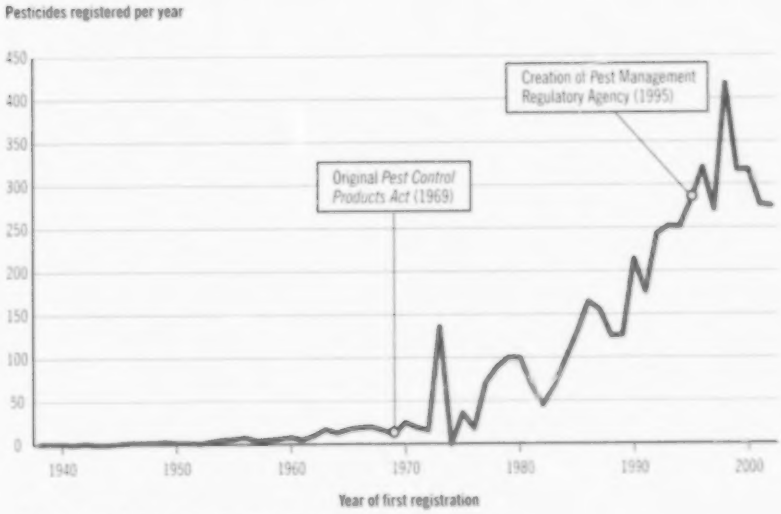
1.51 Older pesticides were not evaluated against current standards. Many pesticides have been registered in Canada for decades (Exhibit 1.7), based on evaluations that did not apply the more stringent methods and standards used today. Some of the changes in requirements include considering the impacts on bystanders, the reproductive impacts on later generations, and the greater susceptibility of children.

1.52 To ensure that older pesticides meet today's standards, the Agency has implemented re-evaluation programs. All pesticides re-evaluated so far were found to pose unacceptable risks for some uses and had to be restricted or removed from the market. For example, in January 2003 the Agency published its summary of the re-evaluation of phorate, the active ingredient in an organophosphate insecticide first registered in 1969. It is used to control insects on corn, lettuce, beans, rutabagas, and potatoes. The re-evaluation concluded that the pesticide poses extremely high environmental risks, risks that may not have been assessed when it was first registered: one granule can kill a small bird or mammal. After 31 December 2004, use of this pesticide will not be permitted in Canada.

Active ingredient—The ingredient of a pesticide that actually controls the targeted pest.

1.53 Effectiveness not reconsidered. Many re-evaluations do not consider new information about the pesticide's effectiveness, resulting, for example, from new research. As a consequence, opportunities may be missed to reduce the rate of application. For instance, Agriculture and Agri-Food Canada researchers have shown that in some controlled situations applications of herbicides could be reduced well below the rates on the label and still be effective.

Exhibit 1.7 **Pesticide registrations in Canada**



Note: This includes only pesticides that are still registered.

Source: Based on information from the Pest Management Regulatory Agency

Progress on re-evaluations has been very slow

1.54 By 2006, the Agency plans to re-evaluate all products registered before 1994. This will require reviewing 405 active ingredients, approximately three quarters of all active ingredients currently registered in Canada. Over the last 15 years, we commented three times on the inadequate progress on re-evaluations. By March 2003, only 1.5 percent of the 405 active ingredients had been fully re-evaluated. For a further 6 percent, the Agency has either published a regulatory proposal or taken some regulatory action. The Agency has been working on some of these re-evaluations for more than a decade. The lack of progress was due partly to the limited resources assigned to the task.

Did you know?

Number of pest control products registered in Canada as of 31 December 2002: **5,622**

1.55 Not all old pesticides undergo a full re-evaluation; when some have come up for re-evaluation, the registrants have decided to discontinue the registration. By March 2003, 11 percent of the 405 active ingredients had either been discontinued or were scheduled to be discontinued.

1.56 **Progress depends on U.S. efforts and priorities.** The Agency has decided to rely very heavily on U.S. re-evaluations. This decision offers advantages because the U.S. has devoted significantly more resources to re-evaluations than Canada, but the Agency's success in meeting its re-evaluation deadlines depends on the U.S. regulator's meeting its own deadlines.

1.57 The Agency has increased the number of employees working on re-evaluations from 21 in 1998–99 to 44 in 2001–02. It has also addressed some of the major obstacles to progress, such as the need to implement science policies consistent with the U.S. While it plans to further increase its

re-evaluation efforts, we are concerned that this may not be enough to meet the ambitious deadlines it has set. And now under the new *Pest Control Products Act*, the Agency has legally binding deadlines for starting its re-evaluations.

1.58 **Basic management tools not used.** We are also concerned that the Agency is not using basic management tools to guide its re-evaluations. For example:

- There is no plan containing detailed time and cost estimates by which to gauge the Agency's level of effort and its progress toward its deadlines; nor does the Agency report that progress. The kind of plan we would expect would include contingencies in the event that U.S. progress was delayed.
- We were surprised that the Agency had not screened pesticides to determine its priorities for re-evaluation. We would expect its priorities to reflect, among others, the pesticides used most heavily in Canadian agriculture and those that posed the highest risks to health and the environment (Exhibit 1.8). In our view, this is a necessary step to ensure that the Agency allocates its limited resources appropriately.
- The Agency has not yet established guidelines for determining how quickly pesticides with unacceptable risks should be taken off the market.
- The Agency lacks a clear policy or process for actively informing users when it concludes that a pesticide presents unacceptable risks.

Exhibit 1.8 **Delays in re-evaluating lawn and turf pesticides**

Municipalities across Canada have been debating how to deal with pesticides that are used for "cosmetic" purposes on both public and private properties. Some municipalities have opted to ban or phase out certain uses. Some have adopted bylaws; others have focussed on educating the public.

Some homeowners use pesticides on their lawns and gardens to control insects and weeds.

The Pest Management Regulatory Agency responded to this concern by committing to re-evaluate eight lawn and turf pesticides by 2001. There were four insecticides (chlorpyrifos, diazinon, malathion, and carbaryl) and four herbicides (2,4-D, dicamba, MCPA, and mecoprop). For those that were already being re-evaluated, the Agency gave a higher priority to the lawn and turf uses over other uses.

At the end of our audit work in March 2003, re-evaluations of five of the eight pesticides were still underway. Some of these pesticides were originally registered over 50 years ago. Some changes have been made to the labels for some of these pesticides since then, but it is unlikely that some of their current uses will meet today's higher standards for acceptable health and environmental risks. The delays in re-evaluations mean that Canadians may be unnecessarily exposed to these pesticides. The delays also mean that public debates about pesticide risks are less well informed.

Source: Based on information from the Pest Management Regulatory Agency

The Agency has been slow to manage other components of old pesticides

1.59 Slow progress on formulants. Old pesticides in Canada are composed of more than the active ingredients; they also contain formulants. The federal government has recognized that some formulants may pose a risk to human health and the environment.

Formulant—Ingredient of a pesticide that serves a purpose other than actual control of the targeted pest. Examples include sugar, peanut butter (an allergen), malathion (a pesticide), fuel oil, and nonylphenol (an endocrine-disrupting compound).

1.60 In 1994 the federal government committed to developing a policy on formulants. It published a draft policy in 2000 but has not produced a final document or an up-to-date list of formulants in pesticides used in Canada. Many formulants have not yet been classified by risk. The Agency has taken some action to reduce the risks from the formulants already identified as most toxic, but not all registrants complied with the requirement to phase out these substances by the end of 2002. Micro-contaminants in current pesticides are a similar concern; these are contaminants from the manufacturing process that are of toxicological concern, but are usually found in very low concentrations.

Did you know?

When is a pesticide also a formulant? Sometimes a pesticide—malathion, for instance—will be used to prevent insects from damaging other pest control products, such as baits to kill rodents.

Overall, the Agency is not ensuring that pesticides meet current standards

1.61 Many widely used pesticides have not yet been re-evaluated, but based on those that have, it is likely that some pesticide uses will fail to meet today's standards. And our concerns about the evaluation process for new pesticides, such as working with incomplete information, extend to re-evaluations. For formulants and micro-contaminants of pesticides already in use, progress has been slow in identifying the risks and in taking effective action. The Agency has a responsibility to ensure that its judgments of which pesticides can be used are up to date. In our view, it is not yet fulfilling this essential responsibility. In particular, it needs to assign re-evaluations a higher priority than it has in the past.

1.62 Recommendation. To reduce the risks of older pesticides, the Agency should speed up its re-evaluations. It should demonstrate how it will meet its re-evaluation deadlines and report to Parliament annually on its progress, indicating clearly what remains to be done, what its priorities are, and how it will achieve its objectives. The report should include the Agency's progress in managing formulants and micro-contaminants.

Department's response. Agreed and initiated.

The Agency is conscious of the need to use all opportunities to accelerate the re-evaluation of a large number of pest control products. The strong reliance on U.S. re-assessment efforts offers the best opportunity to do so and the re-evaluation program was implemented after public consultation. As well, additional resources have been dedicated to re-evaluation.

The Agency recognizes the need for more transparency and accountability in reporting on the priorities, progress, and remaining workload on pesticide re-evaluation. Accordingly, the PMRA will report on an annual basis the progress and priorities of the pesticide re-evaluation program.

The management of formulants and micro-contaminants in pest control products always has been part of managing the risks associated with pesticides. The Formulants Policy Regulatory Proposal and the Toxic Substances Management Policy implementation plan for pesticides describe how these substances are managed by the Agency.

Actions being taken:

The Agency has developed and is in the process of implementing a work plan to re-evaluate all older pesticides by 2006. Opportunities to expedite re-evaluation based on international reviews have been identified and will be addressed in Program 1 of the PMRA re-evaluation program.

A re-evaluation note describing the priorities for completion of reviews within fiscal year 2003–04 will be published shortly. The PMRA will report on progress and priorities on an annual basis starting with fiscal year 2003–04. The Agency will include in the annual report that is required by the new *Pest Control Products Act*, progress on managing formulants and micro-contaminants.

1.63 **Recommendation.** To better manage the risks associated with older pesticides, the Agency should develop and implement guidelines for determining how quickly pesticides with unacceptable risks should be removed from the market. The Agency should also develop and implement guidelines for advising current users when pesticides are found to have unacceptable risks.

Department's response. Agreed and initiated.

The Agency recognizes the important and often central role of communication in the management of risk.

The PMRA currently follows a consistent approach in determining how quickly older pesticides with unacceptable risks should be removed from the market. When the risks of a pesticide are found to be unacceptable, possible courses of action under Section 20 of the Pest Control Regulations include cancellation or suspension. The appropriate course of action and timeline for action (for example, last date of use) depend on the nature and severity of the potential risks.

Although the Agency has always communicated risk management decisions to various audiences in a consistent manner, the process has not been documented. To enhance the transparency of these processes, we will develop and publish a description of the process.

Actions being taken:

The Agency will develop and implement internal guidelines for communicating to registrants how older pesticides with unacceptable risks will be removed from the market. The Agency will also develop by the end of fiscal year 2003–2004, a description of the process for advising current users when older pesticides are found to have unacceptable risks. This process will reflect current PMRA practice.

Providing access to new pesticides

Kaolin clay forms a barrier between the pest and fruit that might be attacked.

Photo: Agricultural Research Service, United States Department of Agriculture

1.64 New approaches needed for controlling pests. As a result of re-evaluations, some pesticides may be severely restricted or removed from the market, and replacements may not be readily available. As well, because cropping systems have changed and pests have evolved resistance to certain pesticides, farmers need new products and approaches. Further, many pesticides sold in the U.S. are not available to Canadian farmers. As the Standing Committee on Agriculture and Agri-Food noted, this affects the ability of Canadian farmers to compete.

1.65 While the Pest Management Regulatory Agency is not responsible for developing new pesticides, it determines how quickly it will evaluate new pesticides. Newer pesticides can improve the overall safety of pesticide use by replacing more dangerous products. For example, one new product simply uses a clay barrier to protect developing fruit from insect attacks.

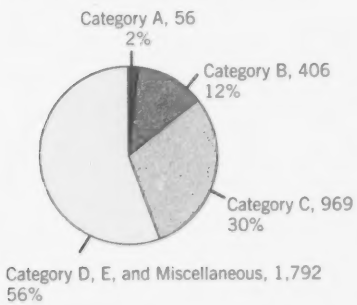
1.66 In 1996, the Agency proposed performance targets for processing new submissions. It has not formally announced the targets, but its staff have worked hard to meet them. By reclassifying submissions and removing dormant ones, they have also eliminated most of the backlog of hundreds of unfinished evaluations that the Agency inherited when it was created.

The Agency is not meeting its performance targets consistently

1.67 In 2002–03, the Agency received 3,223 submissions (Exhibit 1.9). Its performance standards set out the time allocated to process a submission and state that 90 percent of submissions will be processed in that time. The target time for standard registration of a pesticide never before registered in Canada is 737 calendar days, over two years. However, if a submission is deficient and the Agency needs more information from the registrant, the process could take close to five years or more. Smaller submissions that require less information, such as a change in how a pesticide is applied, can take as few as 17 days.

Exhibit 1.9 **Types of pesticide submissions**

Proportions of submission types in 2002–03



Source: Based on information from the Pest Management Regulatory Agency

Category A—new active ingredients and the related end-use products. They are usually accompanied by a significant amount of data that supports their safety and value.

Category B—new products with an active ingredient that has already been registered. They are less complex and take less time to review than Category A submissions.

Category C—submissions with no or reduced data requirements for new or amended registrations.

Categories D, E, and Miscellaneous—mostly administrative submissions including those that register or amend products within particular programs. These also include permits to use pesticides for research purposes.

1.68 The Agency has significantly improved the rigour and timeliness with which it processes submissions, compared to before the Agency's creation. It continues to refine these processes. However, it has not met its performance targets consistently—even for high-profile new products (Exhibit 1.10). In March 2003 its evaluations of 33 percent of submissions were overdue—some by almost three years. Delays in processing submissions can have serious economic consequences for registrants and farmers, especially if they mean postponing sales of the product for a full year until the next growing season.

Exhibit 1.10 **How the Agency performs against its targets**

	Total time (calendar days)[1]		Percentage meeting performance target[2]	
Category	Average	Range	Screening	Scientific review
A	748	42 to 2,107	32	74
B	351	5 to 1,956	25	85
C	351	2 to 1,174	51	63
D	124	2 to 868	59	31

Based on submissions completed in 2002–03

[1]Note that total time depends on both the Agency's performance as well as how quickly registrants respond to deficiencies.
[2]The Agency attempts to meet its performance targets for 90 percent of submissions.

Source: Based on information from the Pest Management Regulatory Agency

Planned performance gains have not been achieved

1.69 **Efficiency improvements are limited.** When it created the Agency, the federal government committed to processing submissions more efficiently. The Agency was to meet its commitment to a 40 percent improvement by 2003 partly by using electronic submissions and conducting reviews jointly with the U.S. By 1999–2000, the Agency calculated its improvement at about 15 percent. It now relies on the use of electronic submissions by registrants to help increase its efficiency, but only a few fully electronic submissions have been made so far.

1.70 **Joint reviews are not achieving planned gains.** The Agency and its U.S. counterpart can share the work of evaluating pesticides because they use similar evaluation processes. Joint reviews with the U.S. began in 1996, and offer benefits such as reduced trade irritants. They were also expected to make evaluations faster and less costly. In practice, joint reviews are not faster for the Canadian evaluators. We noted that the Agency has had problems co-ordinating priorities and schedules with the U.S. evaluators. It does not know if joint reviews have saved it money because it does not track or estimate its costs or level of effort by submission.

1.71 The Agency expected efficiency gains to free resources for new product evaluations, re-evaluations, reporting of adverse effects, and public access to registration information. However, resources were not freed as the Agency planned.

Minor use pesticides pose other problems

1.72 Some pesticides are used only on a small area because the area affected by pests or the total crop area is small. Such minor use pesticides can be particularly important to growers of fruit and vegetable crops with fewer pest control options.

Minor use pesticide—A pesticide required by growers, but in such small quantities that the anticipated sales volume is not sufficient to persuade a manufacturer to register and sell the product in Canada.

1.73 Some growers feel the Agency has hampered their access to needed minor use pesticides by processing evaluations too slowly, imposing "excessive" requirements for tests of effectiveness and trials to detect the presence of residues, and refusing to accept some U.S. registration data. Growers have also said that the Agency is unresponsive. Growers without other options could press for emergency registrations of pesticides, including older, more dangerous products.

1.74 The Agency has not met its targets for evaluating minor use pesticides consistently; in March 2003, about one quarter of the 129 outstanding submissions were overdue—five by more than a year.

1.75 Other concerns reflect questions over which data are essential for the Agency to evaluate minor use pesticides. There are questions about the extent to which Agency evaluators can accept data from similar crops and geographic areas and still ensure that a pesticide is effective and the risks are acceptable. Agriculture and Agri-Food Canada is now increasingly involved in conducting some of the necessary background studies. In our view, the Agency and Agriculture and Agri-Food Canada need to resolve these concerns about data together and then advise those who will be conducting the effectiveness and pesticide residue studies.

A new initiative to make minor use pesticides more available

1.76 On 24 June 2002, the Minister of Agriculture and Agri-Food announced several new measures to address the major concerns of growers. Over the next six years, $54.5 million will be allocated jointly for Agriculture and Agri-Food Canada to help prepare submissions for new minor use pesticides and for the Agency to evaluate the submissions. The Agency has also hired an advisor as a contact person for growers.

1.77 One year after the funding announcement, Agriculture and Agri-Food Canada had made progress identifying the priority needs for minor use pesticides, but had not finished setting up the organization needed to manage the work on submissions. Nor have the Department and the Agency finalized a memorandum of understanding that outlines their respective roles and responsibilities. In our view, the delays could result in continued frustration for growers.

Ensuring compliance

1.78 The federal government enforces compliance with the *Pest Control Products Act* and the *Food and Drugs Act*. The *Pest Control Products Act* influences how pesticides are produced, distributed, and used. Lack of compliance could cause serious environmental impacts and expose users and bystanders to unnecessary risks. The *Food and Drugs Act* deals with residues in food; lack of compliance would affect those who eat treated or contaminated

food. Other legislation covers the use of pesticides on seeds, in animal feed, and in fertilizers. The provinces and territories also take compliance and enforcement action in complementary areas.

To verify compliance, a pesticide officer collects and preserves samples for analysis during an inspection.

Photo: Pest Management Regulatory Agency

The Agency does not know to what extent users are complying with pesticide labels

1.79 The Agency conducts inspections across the country to determine whether pesticide registrants, distributors, and users are complying with the *Pest Control Products Act*. It targets inspections each year using available information and the experience and informal networks of its regional pesticide officers.

1.80 The Agency's compliance staff recently shifted their focus from users to the relatively small number of registrants and distributors. Particularly in re-evaluations, they feel that this focus can make them more effective. As a result of re-evaluations, the Agency has required registrants and distributors to remove some pesticides from the market.

1.81 **Limited and unreliable information about user compliance.** The Agency conducted only 510 inspections of users in 2002–03, although in agriculture alone roughly 216,000 farms in all regions of the country could have used pesticides. Inspection programs check which pesticides are being used, but do not determine systematically whether the label requirements are being met. The Agency's samples do not provide a statistically reliable basis for drawing conclusions about compliance rates.

1.82 The Agency has identified several examples of poor overall compliance. In 2001 it collected soil samples from 20 onion growers in Ontario. Of those, 14 had violated the Act by using pesticides not registered in Canada. Four of the other growers were using pesticides not registered for use on onions. (The Agency has warned the 14 growers and is continuing to follow up.)

Problems with labels make it harder to ensure compliance

1.83 Lack of compliance is partly due to problems with pesticide labels. Some agricultural pesticides may have 30 or more pages of directions in fine print. Some users may not read English or French sufficiently to understand complex labels. Some label instructions are hard to follow (Exhibit 1.11). Not following instructions could affect the health of users and their families, and increase the risks to other people and the environment. If label instructions are not being followed, the Agency may need to reconsider what types of measures it includes on labels.

1.84 Ambiguous labels mean that enforcement action cannot be taken for some possible violations of the Act (Exhibit 1.12). The Agency is improving the wording on some labels when pesticide registrations are renewed, but will not update other labels until it does a full re-evaluation of the products. We also noted one label with instructions that conflicted with the regulatory decision published by the Agency. We are concerned that the Agency has not systematically reviewed pesticides currently in use and determined to what extent the labels carry vague and unenforceable instructions.

Exhibit 1.11 **Examples of vague labels**

Label statements	Comment / issue
"Buffer Zones: **Appropriate** buffer zones should be established between treatment areas and aquatic systems and treatment areas and **significant** habitat."	The terms appropriate and significant are vague and open to interpretation.
"Do not apply **near** buildings inhabited by humans or livestock..."	The term near is vague.
"Fish and crustaceans may be killed at application rates recommended on this label. Do not apply where these are **important** resources"	The term important is vague.
"Avoid overspraying or drift onto **sloughs**."	Slough is not a common term across the country—so much so that provincial officials asked for assistance in interpreting the label—specifically asking whether that meant that a 15-metre buffer zone was required around streams.

Source: Based on information from the Pest Management Regulatory Agency

Exhibit 1.12 **Difficulties with label instructions**

In November 2002, the Prince Edward Island Department of Fisheries, Aquaculture and Environment responded to local citizens' concerns about water quality by testing the water in two private wells. Provincial officials found contamination from dichloropropene, which is used to control soil pests. Further tests found the same pesticide in 5 of 36 wells tested on and near the farm that was believed to be the source of the contamination. The Water Quality and Health Bureau of Health Canada issued an emergency health advisory at the request of the province.

The Agency investigation concluded that the product appeared to have been applied according to the label instructions, with the possible exception of one instruction:

> Do not apply in areas where soils are highly permeable and ground water is near the surface.

The Pest Management Regulatory Agency has concluded that enforcement action could not be taken in this case because the words "highly" and "near" are not specific enough. Also, because the word "and" appears in the instructions, both conditions would need to be met.

This example also illustrates the problem pesticide users have in working with vague labels. In contrast, the U.S. label for the same pesticide was revised in 1998 and is more specific on conditions of use, including a 100 foot (30 metre) buffer zone around any well used for potable water.

Source: Based on information from the Pest Management Regulatory Agency

The Agency does not know how effective its compliance activities have been

1.85 We noted that when Agency pesticide officers have clearly documented violations of the *Pest Control Products Act*, they consistently take action. Since 2001, officers have been able to levy fines, an enforcement option that fills the gap between warning violators or sending educational letters, and prosecuting violators. The Agency has now used this option more than 40 times.

1.86 The Agency does not have reliable or timely information on the effectiveness of its compliance programs. For example, the Agency does not know whether its programs to follow up on violations by greenhouse pepper growers have been successful. Therefore, it is difficult for the Agency to determine what resources are needed and to help target its limited inspection and enforcement activities systematically or on the basis of risk. Nor can it demonstrate that it is meeting its commitment to ensure compliance with the *Pest Control Products Act*.

1.87 **The job will get harder.** With more re-evaluations and tighter restrictions on the availability and use of pest control products, the Agency anticipates more difficulty in ensuring compliance. As one Agency document noted, "This kind of change to registered products is massive and has never happened on this scale before." In our view, ensuring compliance will be even harder in cases where few pest control alternatives are available.

1.88 Overall, the Agency can provide only very limited assurance that pest control products are used according to the *Pest Control Products Act*, relevant regulations, and label instructions.

1.89 **Recommendation.** To determine compliance levels and target its activities more efficiently, the Agency should implement measurement and reporting procedures that will give it reliable and timely information about user compliance.

Department's response. Agreed in principle.

The Agency agrees that it is important to efficiently target its compliance activities effectively and will develop revisions to the current Agency approach to measurement and reporting on compliance while taking into consideration other provincial, national, and international compliance and enforcement regulatory authorities.

The Agency agrees that user compliance is important; responsibility in this area is shared between the federal and provincial/territorial governments. Given finite Agency resources, an increased or exclusive focus on user compliance will be at the expense of activities and programs targeted at distributors and registrants. The Agency will continue to determine the appropriate and most effective balance for its compliance activities.

Actions being taken:

The Agency has initiated discussions with comparable Canadian and international organizations that are responsible for promoting, inspecting, and enforcing compliance to determine how, with finite resources, they target

activities and how they measure user compliance. Measurement and reporting procedures will be developed by end of 2007.

Discussion with provincial-territorial pesticide regulatory authorities will start late in 2003 and are expected to finish in 2005, to enhance the sharing of information about user compliance.

The Canadian Food Inspection Agency's chemical residue sampling program includes testing for pesticide residues in food.

Photo: Health Canada

Methods for measuring pesticide residues on food are not up-to-date

1.90 The Canadian Food Inspection Agency conducts an extensive chemical sampling program that includes testing each year for pesticide residues in food. In 2001–02, it analyzed 2,548 samples of domestic fruits and vegetables and 13,557 samples of imported fruits and vegetables for a variety of pesticides. These random samples are collected to estimate compliance rates and may be tested for more than one contaminant, including pesticides. The results are compared with the maximum residue limits set by the Pest Management Regulatory Agency. In 2001–02, 97.6 percent of domestic samples and 99.3 percent of imported samples were below the limits.

1.91 We have three concerns about this program. First, methods for measuring pesticide residues on food are not up-to-date. The Canadian Food Inspection Agency currently uses a risk-based, multi-residue testing method that screens for 269 different pesticides in various commodities. However the Agency has identified more than 190 additional pesticides, used in Canada or in other countries that export food to Canada, for which practical testing methods are not available. Second, the small number of samples tested for any given pesticide on one type of food may prevent meaningful conclusions about compliance with the limits. As a result, the Canadian Food Inspection Agency can provide only limited assurance that pesticide residues on food comply with the *Food and Drugs Act*. Third, some of the residue limits set by the Pest Management Regulatory Agency are based on old assessments and are inconsistent with current standards. These will be re-evaluated when the pesticides are re-evaluated.

Understanding the impacts of pesticides

1.92 Pesticide use in Canada has resulted in contamination of drinking water sources and harm to birds and fish. The Pest Management Regulatory Agency needs to understand the impacts of pesticides and how well measures to reduce those harmful effects are working. Understanding the health and environmental impacts of pesticides requires both field research to identify possible new harmful effects and long-term monitoring to track the impacts over time. Other levels of government and other federal departments are responsible for research and monitoring. The responsible federal departments include Agriculture and Agri-Food Canada, the Canadian Food Inspection Agency, Environment Canada, Fisheries and Oceans Canada, Health Canada and Natural Resources Canada.

1.93 We examined the following:

- information on pesticide use and exposure;
- research on health impacts;
- research on environmental impacts;

- overall monitoring, with a focus on water quality; and
- co-ordination of these activities among federal departments and agencies.

Critical information on pesticide use and exposure is still missing

1.94 Pesticide sales database only in prototype. In 1994 the federal government said it would set up a database on pesticide use. Such a database would support better targeting of research, monitoring, and compliance activities. In 1999 and 2002, we criticized the Agency for not acting on this commitment. The database, which is still not in place, will include only data on sales of pesticides and not on their use. The Agency has developed a prototype using data provided by the industry, but implementation is still a long way off and significant obstacles remain, such as a lack of agreement on the level of geographic detail in the database.

Female mallard poisoned from the accumulation of an organophosphate pesticide in standing water on an agricultural field in British Columbia.

Photo: John Elliot, Canadian Wildlife Service, Environment Canada

1.95 Without this information, Agency staff must attempt to piece together for each re-evaluation a separate picture of how that pesticide is used. It does not have up-to-date information on hand. When we asked the Agency which pesticides were used most widely in Canada, it referred to sales data from 1994.

1.96 Gaps in data on Canadians' exposure to pesticides. To estimate the exposure of Canadians to pesticides through food consumption, Agency evaluators have relied on U.S. data from the mid-1990s or Canadian data from the 1970s. In neither case are the data likely to accurately capture current patterns of food consumption in Canada. Canadians are also exposed to pesticides through drinking water, but the Agency has only limited and inconsistent data available on this source of exposure. As a result, evaluations are based on theoretical models that may not accurately reflect how pesticides move in the environment.

1.97 Monitoring of adverse effects still not implemented. Reports of pesticide problems by registrants, doctors, provincial agencies, university researchers, and pesticide users could help the Agency and other organizations understand the impacts of pesticides. Currently, the adverse effects of pesticides on human health and the environment are tracked and reported only on an ad hoc basis. In 1994 and again in 2000, the federal government committed to developing a program of mandatory reporting, in a consistent format, on adverse effects of pesticides.

Did you know?

Number of Québec poison control centre calls in 2002 associated with

- Pesticides: 2,096
- Medications: 18,921
- Other domestic products: 22,922
- Industrial products: 1,564

1.98 With the new Act, registrants will be required to report adverse effects to the Agency. The Agency has laid part of the foundation for the program. We are concerned, however, about the work that remains, particularly as the program is to include voluntary reports from other sources such as pesticide users, physicians, and provincial environment and agriculture departments.

1.99 In our view, the lack of reliable information on pesticide use, exposure, and impacts is a major hurdle that continues to interfere with the Agency's ability to regulate pesticides.

1.100 Recommendation. To support sound regulatory decisions, the Agency should accelerate and promptly complete the implementation of its pesticide sales database and its reporting system for adverse effects. Environment Canada and the rest of Health Canada should co-operate with the Pest Management Regulatory Agency to fill the gaps in the Agency's information on pesticide exposure through food and water.

Departments' response. The Agency agrees that implementation of a sales database and a reporting system for adverse effects should be implemented as expeditiously as possible.

The new *Pest Control Products Act* (PCPA) imposes a mandatory requirement on registrants to report any prescribed information that relates to the health or environmental risks or value of a pest control product registered to them. It also requires registrants, as a condition of registration, to report information on the sales of each of their products. Relevant discussion documents, *Preliminary Consultation on Proposed Sales Reporting Regulation* and *Pesticides Adverse Effects Reporting Regulation*, have been published and the PMRA has prepared drafting instructions for proposed regulations that take into consideration the comments received. Regulations that will require the reporting of pesticide sales data, and the mandatory reporting of adverse effects, are included in the first phase of regulations that are being developed so that the new PCPA can be brought into force at the earliest possible date. It is anticipated that reporting of 2003 sales information will be required in 2004.

Water quality monitoring is a shared responsibility of all levels of government. As a federal contribution, Health Canada and Environment Canada will continue to work closely with the PMRA and the provinces and territories, who have primary jurisdiction for water, to promote the monitoring and reporting of pesticides in water through their various federal-provincial-territorial committees.

Health Canada will provide pesticide residue information to the PMRA on food safety priority issues, as resources permit.

Actions to be taken:

A discussion document, *Preliminary Consultation on Proposed Sales Reporting Regulation*, has been published and the PMRA has prepared drafting instructions for a proposed regulation that takes into consideration the comments received. The proposed regulation would require every registrant of a pest control product to submit an annual report to the PMRA detailing information on sales, by province and territory, for each product during the previous calendar year. The sales information would be required for all end-use products, technical grade active ingredients, and manufacturing concentrates. *Canada Gazette*, Part I publication is expected in the current fiscal year. It is anticipated that reporting of 2003 sales information will be required in 2004.

The adverse effects reporting program proposal has been published for public comment and the PMRA has prepared drafting instructions for a proposed

regulation that takes into consideration the comments received. The proposed regulation would specify the types of information to be reported and the time frames for reporting. It would require registrants to report information they receive that pertains to adverse effects in humans, domestic animals, and the environment associated with the use of pesticides registered in Canada. *Canada Gazette*, Part I publication is expected in the current fiscal year. The Agency is finalizing the program details in accordance with comments received. It is anticipated that Phase 1 (required reporting by registrants) will be implemented in 2004. Voluntary public reporting will be implemented thereafter.

The Health Canada Food Program will consider pesticide-related health research and monitoring when setting priorities, and fund as resources permit.

Federal research on the health impacts of pesticides has not been a priority

Children may be more sensitive to pesticide exposure than adults.

Photo: Health Canada

1.101 The most controversial issues surrounding pesticide use include questions about their effects on health, such as long-term neurological impacts. The Agency recently identified some general priorities for research on health impacts that could help it to improve its regulatory decisions. For example, the Agency adjusts its risk estimates to account for the greater sensitivities of children and the elderly (Exhibit 1.6). These factors need to be examined to determine if they are appropriate.

1.102 Priorities are not reflected in research. While the Agency has to provide more details on its research priorities, the rest of Health Canada has taken only very limited steps to meet the Agency's needs. This is despite the Department's mandate for public health research and the federal government's stated priority for research on the effects of pesticides on children and other vulnerable populations. Nor has the Department said where pesticides research ranks among its priorities. Health Canada has very limited dedicated funding for research on human exposure to pesticides or the resulting health effects. Three researchers are working on current pesticides, and they rely primarily on outside funding. Unlike other science-based departments, Health Canada did not receive additional funding for research with the new *Pest Control Products Act*.

Some environmental impacts have been researched

1.103 Federal environmental research on currently used pesticides has focussed on some pesticides, addressing their impact on aquatic ecosystems and wildlife. The research could provide information needed for re-evaluations and suggest cases that require special reviews. For example, research by scientists at the National Water Research Institute contributed to a special review of tributyltin (Exhibit 1.13). Even with this focussed research, there are sometimes very long time lags between research results and regulatory action.

1.104 Overall priorities are not yet clear. Linked to passage of the new *Pest Control Products Act*, Environment Canada, Fisheries and Oceans Canada, and Natural Resources Canada received funding for research on environmental impacts. They have not yet jointly set their priorities for this

research although discussions are underway. The Agency has prepared a list of environmental research and monitoring needs, but it has to state its requirements in more detail so that other departments can better provide the information needed by Agency regulators.

Exhibit 1.13 **Special review of tributyltin**

According to scientists who have studied tributyltin, it is perhaps the most toxic chemical that has ever been deliberately introduced into the aquatic environment. Paints containing tributyltin are used to prevent the fouling of underwater structures and boats. It is also an endocrine-disrupting substance that affects the sexual characteristics of marine invertebrates at extremely low concentrations.

Paints containing tributyltin are used to prevent the fouling of boats and underwater structures by aquatic organisms such as barnacles.

Photo: James Maguire, Environment Canada

Concerns about tributyltin were first identified in 1975, and a series of studies by scientists from Environment Canada, Fisheries and Oceans Canada, and other countries confirmed the problem. Regulations were introduced in many countries in the 1980s and the 1990s. In Canada, antifouling paint containing tributyltin was regulated in 1989, however a survey five years later showed the problem had not been solved. Following a two-year special review, the Agency said that no antifouling uses of tributyltin would be permitted in Canada as of 1 November 2002—27 years later. There may be significant concentrations in some sediments in Canada for another 20 to 30 years because of the persistence of the substance. This example and other special reviews point to the need for better and faster ways to translate research results into regulatory action.

Source: Based on information from the Pest Management Regulatory Agency

A co-ordinated monitoring program is still not in place

1.105 No shared priorities for monitoring. The federal government's long-term monitoring for the presence and effects of currently used pesticides has also been limited to a relatively small number of pesticides and specific problem areas. We found that the departments concerned (Environment Canada, Fisheries and Oceans Canada, Health Canada, and Natural Resources Canada) did not have their own overall priorities for pesticide monitoring, nor was there a shared set of priorities. The departments have not developed and maintained a consolidated inventory of current monitoring programs for use in identifying critical gaps in information. Environment Canada has developed an inventory of its programs but not in enough detail to identify gaps.

1.106 Gaps in monitoring of water quality. The weaknesses in the current federal approach are illustrated by the monitoring of pesticides in water. Scientists at a recent National Water Research Institute workshop noted that

> In Canada we currently lack a systematic, co-ordinated, interjurisdictional system for monitoring pesticides in aquatic systems (both water and sediment). At present our database in this respect is poor. This lack of monitoring data diminishes our ability to identify problematic or potentially problematic chemicals, and/or to identify areas that may be threatened. In part, this lack of data is due to the lack of co-ordination between provincial and federal authorities.

Environment Canada has now begun work on a nationally co-ordinated program for monitoring currently used pesticides.

1.107 Guideline development has lagged. While much of the monitoring of pesticides in Canadian waters is done by provincial authorities, the federal government has worked to provide consistent guidelines for pesticides of national concern that may contaminate water. A federal-provincial-territorial committee oversees development of the national *Guidelines for Canadian Drinking Water Quality*. Health Canada plays a pivotal role, evaluating candidate pesticides and preparing the required technical assessments. The current guidelines cover only 28 pesticides currently registered in Canada, including some of the most widely used pesticides. But the development of guidelines has lagged behind the registration and use of new pesticides. For example, the widely used herbicide MCPA was first registered in 1952 and is now undergoing re-evaluation by the Agency. A drinking water quality guideline for this pesticide is finally being developed. Health Canada does not have a process to scan current pesticides to determine which other guidelines need to be developed. The national guidelines to protect aquatic life developed by the Canadian Council of Ministers of the Environment with the support of Environment Canada cover 30 pesticides currently registered in Canada.

1.108 Recommendation. To support more effective monitoring of pesticides, Health Canada and Environment Canada should ensure that they identify the need for and support the development of up-to-date water quality guidelines for the pesticides that pose the greatest risks to Canadians and their environment.

Departments' response. Agreed and implemented.

Health Canada and Environment Canada agree with this recommendation and view water quality guidelines as important tools that facilitate the interpretation of water quality monitoring data.

In Canada, national water quality guidelines are developed through federal-provincial-territorial mechanisms. Drinking water quality guidelines are developed by Health Canada, the provinces, and territories through the Committee on Drinking Water, a sub-committee of the Committee on

Environmental and Occupational Health. National water quality guidelines for the protection of aquatic life are developed by Environment Canada, the provinces, and territories through the Canadian Council of Ministers of the Environment, Water Quality Task Group. As such, the annual priority-setting process is multi-jurisdictional in nature and must consider a wide range of parameters, including pesticides, for guideline development. Within current capacities, Health Canada and Environment Canada agree that pesticide guideline development will continue to be a priority for both departments, particularly as new pesticides are introduced into Canada which have the potential to contaminate water sources.

Actions being taken:

To establish which pesticides pose the greatest risk to the aquatic environment and human health, the PMRA, other Health Canada branches, and Environment Canada will establish a ranking of pesticides that have the greatest potential to contaminate surface and ground waters. This ranking will be developed; implementation for newer chemicals can begin immediately; for older chemicals, implementation is tied to the re-evaluation cycle.

This ranking will be brought to the attention of the federal-provincial-territorial committees that develop drinking water guidelines and water quality guidelines for the protection of aquatic life for consideration in their guideline priority-setting process. The ranking will also be a useful tool for identifying priority pesticides for research, monitoring, and surveillance programs.

A water sample is taken to monitor pesticide levels in a creek.

Photo: Agricultural Research Service, United States Department of Agriculture

1.109 Appropriate analytical methods are not always available. Registrants must give the Agency descriptions of methods that could be used to measure pesticide residues, but the methods may be too costly or not sensitive enough for other purposes, such as field research and monitoring pesticides in use. As a result, federal scientists may have to use their limited resources to develop suitable methods.

Departments are making new efforts to work together

1.110 In 1999 we noted that the Agency was not sharing information effectively or working co-operatively with other departments. Since December 2001, the Agency and other departments have pushed for stronger interdepartmental co-ordination. In part, this has been the result of the new *Pest Control Products Act* and the accompanying additional resources. A working group of representatives of the key departments is now addressing pesticide research and monitoring needs.

1.111 While we found the current working relationship among the departments promising, significant challenges remain to set and sustain clear priorities across the departments and implement a strong accountability framework. For example, the Agency and other government departments need to define clearly how the other departments will support pesticide regulation, and, in particular, contribute to pesticide re-evaluations through their research and monitoring work. In our view, more attention is also

needed on strengthening formal mechanisms, such as memoranda of understanding, to complement the relationships between the members of the working group.

1.112 **Recommendation.** To better support pesticide regulation, the Agency, other branches of Health Canada, Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, and Natural Resources Canada should jointly establish research and monitoring priorities focussed on regulatory needs. They should clearly indicate which departments will be accountable for what research and monitoring results. They should work with the provinces and territories, as necessary, to implement the research and monitoring programs.

Departments' response. The departments agree with the principles of co-operation and co-ordination made in the recommendation.

The departments are already committed to a high level of co-ordination not only for surveillance, monitoring, and research on the effects and levels of pesticides but also for reducing the risks associated with pesticide use including the development of alternate pest management strategies. As a result of recommendations made by the Standing Committee on Environment and Sustainable Development for strengthening co-operation between departments, a working group on pesticide and pest management was established in December 2001 under the Memorandum of Understanding which exists between the five natural resource (5NR) departments. This working group is still considered to be the most appropriate vehicle to develop research and monitoring priorities of shared interest. The departments will continue to look for opportunities and efficiencies to co-operate including networking, joint planning sessions, collaborative monitoring and research projects, and information sharing and collaboration with the provinces and territories in areas where they have jurisdictional responsibility for monitoring activities.

Research and monitoring activities will provide information to support priority regulatory science needs under the *Pest Control Products Act*, such as the presence and effects of pesticides in the environment, and information on agricultural practices such as crop profiles. These activities will also provide the government with information to meet other federal mandates for protection of health and the environment.

While each department is accountable for results from research and monitoring, all departments have committed to reporting results and progress in the annual working group report.

Actions being taken:

The terms of reference of the 5NR Working Group on Pesticides and Pest Management will be reviewed and revised, where necessary, by January 2004 to include the responsibility for jointly developing priorities for research and monitoring. The Working Group will ensure that the timing of the priority-setting exercise will allow for input into the yearly planning activities

of each department. The first session to develop joint priorities will be held in the fall of 2003.

The 5NR Working Group on Pesticides and Pest Management will report yearly on the results of research and monitoring activities undertaken.

The Health Canada Food Program will consider pesticide-related research and monitoring when setting priorities, and fund as resources permit.

Addressing the Agency's management risks

1.113 We examined three key risks to how the Agency is managed as an organization: human resources, funding, and performance tracking and reporting. The Agency has not analyzed its business risks, but senior managers were well aware of the challenges facing the organization.

Human resources management continues to be difficult

1.114 We found that the Agency has three related human resources issues to manage. First, from year to year the number of new submissions and, as a result, the Agency's workload, may vary by 20 percent or more. This clearly puts strains on the organization as the skills and experience to evaluate submissions are not easily obtained from contractors, and new evaluators cannot be hired and trained quickly. We found that performance has suffered in some areas, such as developing new methods. It has meant that the Agency has had to reallocate work and adjust priorities.

As a science-based, regulatory organization, the Pest Management Regulatory Agency needs qualified and experienced employees.

Photo: Agricultural Research Service, United States Department of Agriculture

1.115 Second, any science-based, regulatory organization like the Agency cannot function unless it can attract and retain qualified, experienced employees. Some senior managers told us that turnover in key parts of the Agency had affected timely processing of submissions. In a 2002 survey of public servants, Agency employees were almost twice as likely as other federal employees to feel that turnover had strongly affected their group. Given the importance of this issue, we were concerned when the Agency was not able to readily provide us with accurate information on turnover. The Agency's current estimate of turnover is 10 percent per year—high by comparison to similar organizations.

1.116 Third, and of greatest importance, the Agency is now trying to cope with a period of rapid growth as a result of the new legislation. From April 2002 to February 2003, the Agency grew from 367 to 451 employees—an increase of 23 percent. The Agency estimates that it will need approximately 250 new employees between 31 March 2002 and 1 April 2005. It has met its staffing targets for 2002–03, but does not have a staffing plan that clearly links its future plans to the people it needs and its plans to recruit them. The large influx will place additional demands on existing staff to train new employees while maintaining adequate quality controls. The Agency's internal training program will be responsible for meeting some of the initial orientation needs, however other expertise can only be gained through operational experience and on-the-job coaching.

1.117 **Recommendation.** To ensure that it has the people it needs and that its new resources are used efficiently, the Agency should develop and implement a staffing plan that links its future activities to its staffing actions.

Department's response. Agreed and completed.

The Agency recognizes the need for recruitment and retention of employees to accomplish the mandate that has been assigned to PMRA and to implement the requirements of the new *Pest Control Products Act*.

Prior to 1999, staffing plans were prepared on a divisional basis and approved by the senior management committee. In 1999, a recruitment and retention working group was established to address the need to hire qualified individuals to meet the increasing demands and expectations of the Agency as mandated in the anticipated, new legislation. A three-year resource projection and staffing plan was developed. It was on this basis that a generic recruitment exercise was conducted to ensure that all new human resource needs would be adequately met over the next three years. The Agency has an annual planning activity process whereby these three-year resource projections are confirmed and approved. Annual staffing and recruitment strategies are then developed and implemented. The three-year staffing plan is updated annually during the Agency planning process.

Actions being taken:

No additional actions will be taken.

1.118 **Recommendation.** To maintain quality control, the Agency should develop and implement an operational program to handle the influx of new employees.

Department's response. Agreed and completed.

Continuous learning and professional development have been a cornerstone of the success of the Pest Management Regulatory Agency since its beginning. There are currently several programs in place that will continue to ensure the maintenance of quality control while new staff are integrated into the Agency.

To maintain quality control, study evaluations related to pesticide submissions all undergo both a peer review as well as manager review and sign-off. A final decision is made by the senior science committees (Science Review Committee or Re-evaluation Management Committee).

The Agency has an extensive in-house orientation program for all new staff. One of the key objectives of the program is to ensure that new staff members can do their job and do it well in as short a time as possible.

A development program for biologists and chemists was launched in May 2003. This is the first program of this kind for scientists in the federal government. Through the development program, new staff are assigned a learning "coach" who helps with on-the-job training as well as development. The participants are also assessed on a six-month basis against pre-established competency profiles for their job in order to identify development and learning priorities and also to determine when they have met the competencies required for the next level.

Actions being taken:

No additional actions are planned at this time.

Funding has been pieced together from several sources

1.119 **Funding less than anticipated.** The financial resources needed to run the Agency have come from various sources. Funding requirements of $34 million per year were identified when the federal government first proposed the Agency in 1994, but funding in 1996–97 was only $25.6 million. When the Agency was created in 1995, senior managers projected that recovering costs from pesticide registrants for processing new submissions would yield $12 million per year. In fact, the Agency has received annually about two thirds of that amount, resulting in an average shortfall of $4.1 million over the last five years, or about 14 percent of the Agency's budget.

1.120 Other funding has come from Health Canada ($0.5 million per year) and from Agriculture and Agri-Food Canada (an average of $2.5 million per year for six years) to reduce the fees paid by pesticide manufacturers, and indirectly what farmers pay for pesticides. The funding arrangement with Agriculture and Agri-Food Canada ended in March 2003. Thus over the past few years, the Agency has found funding to meet some of its short-term needs, but there have been some gaps. For example, Health Canada said the lower than expected funds from cost recovery delayed the re-evaluation of older pesticides.

1.121 With the new legislation, the Agency has received more funding and the future appears more secure. The additional funding is supposed to rise from $7.8 million in 2002–03 to a maximum of $19.6 million in 2007–08, an increase of 61 percent compared to 2001–02. Additional funding then drops to $14.4 million per year. It will not be clear for several years whether these additional funds will permit the Agency to recover from earlier shortfalls, and adequately meet the new demands that it faces.

1.122 **Cost recovery review not yet started.** As part of the cost recovery initiative, the Treasury Board has imposed a series of conditions on the Agency. The Agency has responded to all of these conditions except one. The Treasury Board required the Agency to review the implementation of cost recovery by December 2002. As of March 2003, the review as such had not yet begun. The new target date for completion is March 2004. As a result, the Agency does not have a solid, independent perspective on how well its cost recovery initiative is working. Cost recovery continues to affect many aspects of the Agency's business.

Performance information lacks the cost dimension

1.123 Since its creation, the Agency has made significant gains in internal performance tracking. Initiatives are now tracked against deadlines and reported on a quarterly basis. These are linked back to the Agency's strategic objectives and to the commitments the federal government made in 1994 leading to the creation of the Agency. Delays in progress are clearly identified in these reports. The Agency has also developed a sophisticated, computer-based performance and submission tracking database.

1.124 We found that costs are not tracked or estimated for individual projects or submissions. As a result, the Agency has difficulty determining how serious its performance problems are, adjusting its resources efficiently, or planning its future work effectively and realistically.

1.125 We also found that external reports are much less informative than internal reports. External stakeholders do not have good information about how well the Agency is doing with its submissions. The Agency has made some performance information public but only on the scientific review stage of the evaluation process. It does not provide information on the variation in its handling times for different submissions. Detailed performance information is not available to the public on other Agency initiatives, such as the target listed in Health Canada's sustainable development strategy to "reduce risks from selected products and environmental hazards by improving risk assessment and risk management processes." Given its central role in pesticide management, we encourage the Agency to include a fair and full summary of its activities in the annual report required under the new legislation, including quantitative information about its performance on new submissions and re-evaluations.

1.126 Overall, the Agency faces significant internal challenges, especially those associated with managing its growth. It does not have the tools that, in our view, it needs. These are

- a staffing plan that links its new responsibilities to its staffing actions,
- an operational strategy for managing its new employees,
- a solid review of its cost recovery initiative, and
- cost information tied to its activities.

Moving pest management forward

1.127 **A new phase.** The Agency and other departments involved in pesticide management are entering a new phase with new legislation, resources, and expectations. Public controversy over pesticide use will continue. For example, in Chapter 4 of this report we note that the Commissioner of the Environment and Sustainable Development received a petition concerning the use of pesticides to control spruce budworm in Prince Albert National Park. Increased public scrutiny of the Agency's decision making is likely to increase the need for good risk management and more effective communication.

A pheromone trap—an alternative to traditional pesticides—can be used to monitor pest populations. Male insects are attracted to the scent of the synthetic pheromones and become caught on the sticky base of the trap.

Photo: Ron Hines, Dixon Springs Agricultural Center, University of Illinois

1.128 **The search for alternatives to traditional pesticides.** In our audit, we did not focus on federal efforts to find better ways to manage pests, such as the research by Natural Resources Canada on using viruses to control insects, or the work by Agriculture and Agri-Food Canada on alternative farming techniques. As older pesticides are re-evaluated, the choices for managing pests are evolving, sometimes quite dramatically. In our view, as a longer-term solution to the concerns we identified, the Agency, Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, and Natural Resources Canada need to work together as they continue to pursue new alternatives to traditional pesticides—to move from simply managing pesticides to managing pests sustainably.

1.129 An important element of this management approach will be an overall policy of reducing the risks from pesticides—a commitment the federal government made in 1994. The Agency and other players have been working on a draft policy for over two years. In our view, this needs to be finalized and translated into an operational plan. As part of a framework for reducing risk, the Agency is working closely with Agriculture and Agri-Food Canada to complete pest management profiles for individual crops These profiles, which include basic crop information and alternatives to pesticides, could prove to be an effective way of identifying where new approaches are needed.

Conclusion

1.130 In our view, the framework used by the Pest Management Regulatory Agency in making pesticide evaluation decisions is sound and has improved since the Agency was created. The Agency's process is similar to those of pesticide regulators in other countries, including the United States. However, the Agency needs to strengthen some key safeguards in the framework: using up-to-date evaluation methods; ensuring adequate information; carefully testing its assumptions, especially about user behaviours; and consistently applying its procedures and policies. Until it takes these steps, the Agency can give only limited assurance that pesticides it approves meet today's standards. In particular, we are concerned about the heavy and repeated use of temporary and emergency registrations.

1.131 Older pesticides that need to be re-evaluated present a more serious concern. Many that are widely used have not yet been re-evaluated against current standards, and it is likely that some uses will not meet these standards. The Agency has a responsibility to ensure that its judgments of which pesticides can be used are up to date. In our view, the Agency is not yet fulfilling this essential responsibility. We believe it is critical that it give higher priority and more resources to re-evaluations. It also needs to use some basic management tools to better manage these activities.

1.132 The Agency must also meet its own targets for timeliness in processing submissions on new pesticides. While new measures have been introduced to improve performance on processing minor use pesticide applications, the Agency is not meeting its own targets for this and other types of pesticides. This means that new and possibly safer products are taking longer to get to users than the government had expected. This has economic consequences for registrants and pesticide users, and health and environmental consequences for Canadians.

1.133 When it evaluates pesticides, the Agency assumes full compliance with the *Pest Control Products Act*, relevant regulations, and label instructions. However, it does not have reliable information about compliance rates and the effectiveness of its compliance programs. It can provide only limited assurance that users of pest control products follow the requirements. As a result, a crucial check to ensure that pesticides are used safely is not working as it should.

1.134 Another key safeguard in the management of pesticides is effective research on and monitoring of the impacts of pesticides. The responsible federal organizations are making new efforts to work together. So far, however, the federal government does not have the reliable, up-to-date information about pesticides that it needs to manage them effectively. It lacks significant information on the use of pesticides and exposure to them. Research on health impacts is very limited despite being a stated priority for the federal government. The federal government has not set, for either research or monitoring, clear overall priorities that focus on regulatory needs.

1.135 The Agency also faces significant internal challenges, especially those associated with managing its influx of new employees. It will not be clear for several years if the additional human and financial resources will permit the Agency to recover from earlier shortfalls and adequately support the new demands being placed on it as a result of the new *Pest Control Products Act*.

1.136 Overall, we conclude that the federal government is not managing pesticides effectively. We found weaknesses in many areas, such as re-evaluations, and we noted that problems in some areas spilled over into other activities. For example, gaps in monitoring mean that re-evaluations depend on incomplete, inconsistent, and out-of-date information.

1.137 It is difficult to judge the impact of all these weaknesses on health and environmental risks—federal departments themselves do not know what are the effects. The Agency will need to make improvements in these areas if it is going to meet the demands of the new legislation. The range of weaknesses raises serious questions about the overall management of the health and environmental risks associated with pesticides.

1.138 We identified several related explanations for the problems we noted. The Agency had assigned re-evaluations a low priority and insufficient resources. Expected funds from cost recovery and planned improvements in efficiency have not materialized. In some areas, not enough attention is paid to using some basic management tools and to collecting essential performance information. The connections with other branches of Health Canada and other departments only now are being strengthened to support better-focussed research and monitoring.

1.139 The new legislation and new funding make this a time of transition and opportunity for pesticide management in Canada. The federal government still faces a major challenge. This chapter provides a snapshot to help Parliament measure the government's progress in this area.

About the Audit

Objectives

Our overall audit objective was to determine the extent to which the federal government—primarily through the Pest Management Regulatory Agency—is effectively managing key aspects of pesticide use in Canada. Our audit work included five sub-objectives, to which we applied specific criteria (Appendix). These sub-objectives were to determine the extent to which

- the pesticide registration, re-evaluation, and special review processes are resulting in a mix of registered pesticides that meet current standards for acceptable environmental and health risks;
- the Agency is providing timely access to new pest control products and is re-evaluating older pesticides in a timely manner;
- the federal government ensures compliance with the *Pest Control Products Act*;
- the federal government has tracked the effects of pesticides, including their efficacy and their health and environmental effects, and then used this information in its decision making; and
- the Agency is managing the business risks associated with funding sources and human resources.

We also examined the context of pest management in Canada, including the nature and impact of pest problems, the evolving approaches to pest management, and the risks associated with pesticides in current use.

Scope and approach

Our audit looked at several key aspects of the federal government's pesticide management. We excluded areas such as research on new pest control products, and federal efforts to promote integrated pest management. Rather than address the science behind the Agency's evaluations of pesticides, we focussed on the management context of the evaluations.

We interviewed 124 people outside the federal government and inside the departments and agencies involved in pesticide management. These included senior managers and other staff from the Agency. We reviewed working documents, paper files, and electronic databases, focussing on the decisions about pesticides that posed the highest risks. We conducted interviews and reviewed files in four Agency regional offices. We also observed 12 meetings in which the Agency's senior managers and scientists made decisions about which pesticides could be used in Canada.

We had originally intended to rely on the review of the Agency's cost recovery initiative required by Treasury Board that was to have been completed by the end of 2002. However, because of administrative delays, this review was not available to us.

Our audit supports the Auditor General of Canada's focus on the well-being of Canadians through examination of the environmental and health effects of pesticides. It also supports her focus on the federal government's management of legacy issues, through examination of how old pesticides are being managed.

Some of the quantitative information in this chapter is based on data from various federal and other sources indicated in the text. We have satisfied ourselves as to its reasonableness given the use we made of these data. However, it has not been audited, unless otherwise indicated in this chapter.

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Appendix Audit criteria

Sub-objective 1: To determine the extent to which the pesticide registration, re-evaluation, and special review processes are resulting in a mix of registered pesticides that meet current standards for acceptable environmental and health risks.

Audit criteria:

- The Pest Management Regulatory Agency ensures that the new pest control products it registers are safe.
- The Agency ensures that registered pest control products meet current safety standards through re-evaluation, including special reviews.
- The Agency is taking action to discontinue products with formulants of greatest toxicological concern.

Sub-objective 2: To determine the extent to which the Agency is providing timely access to new pest control products, and is re-evaluating older pesticides in a timely manner.

Audit criteria:

- The Agency is meeting its stated performance standards for review times of registration submissions.
- The Agency is meeting its objectives with respect to timing and costs of re-evaluations.
- The Agency is providing access to minor use pesticides where there is a need.
- The Agency has achieved its stated goals with respect to efficiency improvements in reviewing submissions.

Sub-objective 3: To determine the extent to which the federal government ensures compliance with the *Pest Control Products Act*.

Audit criteria:

- The federal government has a clear understanding of the practices of agricultural and urban pesticide users.
- The Agency ensures that pest control products are used legally, according to the *Pest Control Products Act*, relevant regulations, and label instructions.
- The Agency has efficiently and effectively allocated its resources for compliance and enforcement.

Sub-objective 4: To determine the extent to which the federal government has tracked the effects of pesticides, including their efficacy and their health and environmental effects, and then used this information in its decision-making.

Audit criteria:

- The federal government has set clear priorities for its monitoring efforts, and is allocating its resources efficiently to meet these priorities.
- The Agency has up-to-date and reliable information on the efficacy of pesticides currently in use.
- The Agency has up-to-date and reliable information on the success of the risk mitigations it proposes.
- Health Canada (and the Agency) has up-to-date and reliable information on the health impacts associated with pesticide use.
- Environment Canada, Fisheries and Oceans and the Agency have up-to-date and reliable information on the environmental impacts associated with pesticide use.
- The Agency has established strong linkages in research and monitoring related to pest management with the five natural resource departments.

Sub-objective 5: To determine the extent to which the Agency is managing the business risks associated with funding sources and human resources.

Audit criteria:

- The Agency has identified its key business risks.
- The Agency has established measurable performance indicators and is measuring and reporting its overall performance.
- The Agency has obtained predictable and stable funding to achieve its objectives.
- The Agency has obtained and retained sufficient and appropriate human resources to achieve its objectives.

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2003

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2003

Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 2

Road Transportation in Urban Areas:
Accountability for Reducing Greenhouse Gases

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The 2003 Report of the Commissioner of the Environment and Sustainable Development comprises four chapters and The Commissioner's Perspective—2003. The main table of contents is found at the end of this publication.

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Chapter

2

Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by the Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

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Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases

Main Points

2.1 As part of the Kyoto Protocol, the federal government agreed to reduce Canada's greenhouse gas emissions to six percent below 1990 levels over the period 2008 to 2012. The transportation sector is the single largest source of Canada's greenhouse gas emissions, accounting for 26 percent of total emissions in 2001. Government initiatives to reduce greenhouse gas emissions in the transportation sector are expected to account for about 12 percent of the reduction in Canada's total emissions.

2.2 For the most part, the federal government's actions in the transportation sector to address greenhouse gas emissions through partnership agreements are in the early stages of implementation. Therefore, now is an ideal time to ensure that the accountability provisions for these actions are sound and that improvements can be made where necessary.

2.3 We examined the accountability frameworks in place for three existing federal programs that include expected results for reducing greenhouse gas emissions in the transportation sector. These programs are Transport Canada's Moving On Sustainable Transportation (MOST) program and its Intelligent Transportation Systems (ITS) initiative, and Natural Resources Canada's Canadian Transportation Fuel Cell Alliance (CTFCA) program.

2.4 In general, reasonable accountability frameworks are in place for the programs examined. However, all three programs have shortcomings that may prevent them from achieving their long-term, expected results for reducing emissions. We also found that the ITS projects we examined did not have provisions for reporting on environmental impacts. In addition, a report on the roll-up of project outcomes into overall program results has not been prepared for the MOST program, although a framework for doing so has been developed for phase 2 of the program.

2.5 These concerns, if not corrected, will make it difficult for the federal government to assess the contribution these programs are making to their stated outcomes, including reducing Canada's greenhouse gas emissions.

2.6 All of the federal government's actions under Action Plan 2000 and the Climate Change Plan for Canada to reduce greenhouse gas emissions in the transportation sector involve partnering with other levels of government or other stakeholders. Therefore, it is critical that the federal government develop partnership agreements with a strong accountability framework, and that all partners, including the federal government, be held to account for achieving their stated performance expectations.

Background and other observations

2.7 Over 70 percent of Canada's greenhouse gas emissions from transportation are generated by road transportation, with the majority occurring in urban areas where most Canadians live. Greenhouse gas emissions from road transportation rose by more than 25 percent from 1990 to 2001.

2.8 In Canada, the federal, provincial, and municipal governments share the responsibility for transportation. Although urban transportation is not a federal responsibility, it has an impact on several areas of federal interest, such as health, the economy, and the environment.

2.9 The increasing demands for transportation are leading to trends that are not sustainable. Reducing emissions from transportation represents both a major challenge and an important opportunity. Many of the actions that could be adopted in transportation may generate multiple benefits that go beyond reducing greenhouse gas emissions. These benefits include cleaner air, improved health, more efficient transportation systems, and reduced congestion—all of which make our cities healthier and more sustainable.

2.10 Individual Canadians generate about half of their greenhouse gas emissions from personal road transportation, and the government expects every Canadian to reduce his or her emissions by 20 percent. Programs focussed on promoting education and awareness to change people's transportation behaviour are an integral part of the federal government's strategy to reduce greenhouse gas emissions.

2.11 Tools such as intelligent transportation systems and new technologies being developed are an important part of the solution. Although the technology of fuel cells using hydrogen is promising, the estimated net reduction in greenhouse gas emissions represents a very small portion of the transportation sector's projected emissions through to 2020.

2.12 It is important that Transport Canada's 2003–2005 sustainable development strategy reflect the vision contained in its strategic document *Straight Ahead—A Vision for Transportation in Canada* so that there is a clear and consistent picture of the results that the Department and the federal government, as a whole, want to achieve in the area of sustainable transportation.

Transport Canada has responded. Transport Canada has generally accepted our recommendations. Its responses indicate what it is doing, or plans to do, to address them.

Introduction

2.13 Transportation involves the movement of people and goods by road, rail, air, or marine. The choices that Canadians make today about the operation and use of transportation systems shape the communities they live in and have an impact on the future sustainability of those communities. A transportation system that is affordable, safe, efficient, and environmentally friendly is a fundamental component of sustainable development.

2.14 Transportation has many benefits. Besides bringing people and goods together, it contributes to the development, growth, and prosperity of Canada and the Canadian economy and to the quality of life of all Canadians. However, transportation also comes at a cost, including environmental, social, and economic impacts (Exhibit 2.1).

Exhibit 2.1 **Some environmental, social, and economic impacts of transportation**

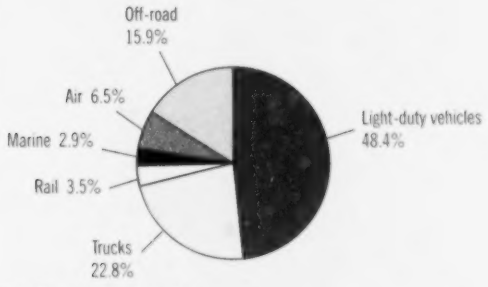
Environmental impacts of transportation include air, water, and noise pollution; the unsustainable use of land and other natural resources; community disruption; habitat destruction; and greenhouse gas emissions from fossil fuel combustion that contribute to climate change. The transportation sector is also a major contributor to smog in urban areas. Smog can damage vegetation and have adverse effects on human health, such as impaired lung function, respiratory infection, and asthma. It has also been associated with certain conditions of heart disease (see the Commissioner's 2000 Report, Chapter 4, Smog: Our Health at Risk). Spills and leaks of fuels, oils, and solid and hazardous waste by-products can contaminate land, surface water, and groundwater.

GO Transit photo by Timothy Hudson

Social and economic impacts can include higher health care expenses, the costs of cleaning up pollution, and the costs associated with accidents and congestion. Congestion can have a severe impact on the efficiency and effectiveness of Canada's transportation system, with delays in the movement of goods increasing costs for businesses and consumers. Congestion also contributes to greater fuel consumption and additional emissions of smog-causing air pollutants and greenhouse gases, which have further impacts on the quality of life and health of individuals.

2.15 According to Environment Canada, the transportation sector is the single largest source of Canada's greenhouse gas emissions, accounting for 26 percent of total emissions in 2001 (the most recent year for which data were available). Road transportation generates over 70 percent of Canada's greenhouse gas emissions from transportation (Exhibit 2.2). Two thirds of these emissions occur in urban areas, where more than three quarters of Canadians live.

Exhibit 2.2 **Sources of transportation emissions, 2001**



Source: Environment Canada

2.16 **Climate change initiatives.** In December 1997, Canada and 160 other countries negotiated the Kyoto Protocol to the United Nations Framework Convention on Climate Change. The Protocol commits Canada to reducing its greenhouse gas emissions to 6 percent below 1990 levels over the period 2008 to 2012 (Canada's Kyoto target). Canada ratified the Protocol in December 2002.

2.17 In the absence of any new (post-1999) policy and program initiatives, Canada will need to reduce its greenhouse gas emissions by almost 30 percent to meet its Kyoto target. The federal government expects every government, region, sector, and Canadian to do their share in meeting Canada's Kyoto target. It has also stated that the transportation sector will be expected to assume its share of the responsibility for meeting Canada's Kyoto target.

2.18 From 1990 to 2001, Canada's overall greenhouse gas emissions rose by 18.4 percent. Greenhouse gas emissions from the transportation sector rose by over 22 percent, while those for road transportation alone rose by more than 25 percent. A major source of this growth was from light-duty gasoline trucks, which include sport utility vehicles (SUVs) and minivans. From 1990 to 2001, emissions from this category of vehicles increased by over 80 percent. During that period, total emissions from cars decreased by 9 percent.

2.19 The federal government estimates that if current trends continue, greenhouse gas emissions from transportation will exceed 1990 levels by 32 percent in 2010 and by 53 percent in 2020.

Rationale for audit selection

2.20 To help reduce greenhouse gas emissions, the federal government has initiated nine actions in the transportation sector under the Government of Canada Action Plan 2000 on Climate Change and the Climate Change Plan for Canada (Appendix A). All of these actions are expected to be delivered through some form of partnership between the federal government and other levels of government or major stakeholders or both. The federal government estimates that these actions will account for about 12 percent of the total anticipated reductions in Canada's greenhouse gas emissions. This is

considerably lower than the transportation sector's 26 percent share of Canada's total greenhouse gas emissions in 2001.

Fuel cell—A device that converts chemical energy into electrical energy without combustion. In a hydrogen fuel cell, hydrogen is combined with oxygen within the fuel cell to produce electrical energy.

2.21 One of the nine actions is the Canadian Transportation Fuel Cell Alliance program, for which Natural Resources Canada is the lead department. We audited this program because the federal government has supported the development of fuel cell technology for over 20 years and has identified it as a means to clean urban air by curbing emissions from vehicles in Canadian cities. We did not audit the eight other actions because, at the time of our examination, either they were in the early stages of implementation or they did not have a strong focus on urban road transportation.

2.22 Some existing federal activities to reduce greenhouse gas emissions in the transportation sector fall outside Action Plan 2000 and the Climate Change Plan for Canada. Given Transport Canada's overall mandate in the transportation sector, we also wanted to examine the Department's programs or initiatives that were intended to have an impact on road transportation in urban areas and lead to reductions in Canada's greenhouse gas emissions.

2.23 Transport Canada identified its Moving On Sustainable Transportation (MOST) program as a key initiative for enhancing Canadians' awareness of sustainable transportation. While the MOST program has multiple objectives (see paragraph 2.44), one of the expected long-term results of the program is the reduction of greenhouse gas emissions and pollution from the transportation sector. By the end of October 2002, the Department had received 125 applications. Successful applicants are eligible for federal funding to a maximum of $100,000 per project and must obtain a minimum of 50 percent of funding from other sources. The Department has provided funding to 39 applicants. An example of a funded project is BikeShare, which was awarded $47,436 to support the Community Bicycle Network's community bike-lending program in Toronto. BikeShare's 10-year plan is to make a fleet of 1,000 bikes available at 80 hubs throughout the city for short trips around the urban core area.

2.24 Transport Canada was also implementing its Intelligent Transportation Systems (ITS) Plan for Canada. The objectives of the ITS Plan include advancing the safety, efficiency, and security of the multi-modal transportation system, providing increased access to transportation services, and reducing fuel consumption and harmful emissions by improving traffic flow. The Department believes that ITS technologies can improve the environment and the quality of life in both urban and rural areas.

2.25 We believe that now is an ideal time to ensure that the accountability provisions for these three programs are sound and that improvements can be made to these programs and other federal actions in the transportation sector to address greenhouse gas emissions, where necessary.

Transportation is a shared responsibility

2.26 Three levels of government in Canada share responsibility for transportation. The federal government is responsible for national,

interprovincial, and international transportation; for safety standards for new motor vehicles, including emission standards for new vehicles and engines; and for fuel consumption standards for new motor vehicles. Provincial governments are responsible for intraprovincial transportation. Municipalities are responsible for urban transit, local roads and related infrastructure, and local planning decisions.

2.27 **The federal role.** Although urban transportation is not a federal responsibility, it has an impact on several of areas of federal interest, such as health, the economy, and the environment. The federal government does have direct influence on urban transportation systems through its ownership of several large properties—national airports, local port authorities, federal bridges, and roads, many of which are in cities.

2.28 Transport Canada is responsible for the transportation policies, programs, and goals set by the federal government. The Department works to ensure that all parts of the transportation system work effectively and in an integrated manner to provide Canadians with a sustainable system that is safe and secure, efficient, and environmentally friendly. Transport Canada's strategic objectives are to

- contribute to Canada's economic growth and social development,
- ensure high standards for a safe and secure transportation system, and
- protect the physical environment.

2.29 In its *Sustainable Development Strategy 2001–2003*, Transport Canada committed to fostering transportation that is sustainable—economically, environmentally, and socially. The strategy identified the following seven priority challenges:

- improving education and awareness of sustainable transportation;
- developing tools for better decisions;
- promoting adoption of sustainable transportation technology;
- improving environmental management of Transport Canada operations and lands;
- reducing air emissions;
- reducing pollution of water; and
- promoting efficient transportation.

These priorities reflect Transport Canada's vision of respecting the environment and balancing its transportation policies to integrate environmental goals.

2.30 In February 2003, the Minister of Transport released *Straight Ahead—A Vision for Transportation in Canada*. The document describes the vision and strategic directions that will guide federal transportation policies and programs over the next decade. It commits Transport Canada to integrating environmental considerations more systematically in making transportation decisions.

2.31 *Straight Ahead* constitutes Transport Canada's contribution toward the government's commitment in the September 2002 Speech from the Throne—to introduce "a new strategy for a safe, efficient and environmentally responsible transportation system that will help reduce congestion in our cities and bottlenecks in our trade corridors." This strategy, or vision, is also expected to help Canada meet its commitments under the Kyoto Protocol. *Straight Ahead* commits the Government of Canada to placing a high priority on urban transportation needs.

2.32 We would expect to see the vision described in *Straight Ahead* incorporated in Transport Canada's 2003–2005 sustainable development strategy. This is consistent with the expectations for the third round of sustainable development strategies to be tabled in Parliament in December 2003; those expectations were outlined in the March 2003 document issued by the Commissioner of the Environment and Sustainable Development, titled *Sustainable Development Strategies—Making a Difference*. It is important that these two strategic Transport Canada documents provide a clear and consistent picture of the results that Transport Canada and the federal government, as a whole, want to achieve in the area of sustainable transportation.

2.33 Natural Resources Canada is mandated to show regard for the sustainable development and wise use of Canada's natural resources. Its key policy priorities include positioning Canada as a world leader in clean energy and tackling the challenge of climate change and the environment through sustainable development. One of the Department's strategic outcomes is providing Canadians with sustainable economic, social, and environmental benefits derived from natural resources for present and future generations. Another is providing Canadians with strategies for reducing environmental impacts in the natural resources sector. A key focus of the Department is the development and demonstration of clean energy technology, including the production and storage of hydrogen and the development of fuel cells.

Key issues

2.34 As Canada's economy and population grow, so too does the demand for transportation. This in turn is leading to increased negative environmental and health impacts and to trends in transportation that are not sustainable, particularly in urban areas.

2.35 To achieve the objective of developing an integrated, coherent transportation policy framework, Transport Canada recognizes that partnerships and collaboration among governments as well as others are essential. These efforts need to take into account the respective jurisdiction, roles, and responsibilities of all participants.

2.36 All of the federal government's actions under Action Plan 2000 and the Climate Change Plan for Canada to reduce greenhouse gas emissions in the transportation sector involve partnering with other levels of government or other stakeholders. Therefore, it is critical that the federal government develop partnership agreements with a strong accountability framework and

that the partners, including the federal government, be held to account for achieving their stated performance expectations and helping to meet Canada's Kyoto target.

Focus of the audit

2.37 We focussed our audit on road transportation in urban areas because Canada is an increasingly urban nation and road transportation is a major contributor to Canada's greenhouse gas emissions and smog.

2.38 Our overall audit objectives were to determine whether

- appropriate accountability frameworks are in place for federal programs associated with road transportation in urban areas and for the resulting partnerships that are derived from them, and
- accountability is occurring for the programs covered by the audit.

Accountability—A relationship based on obligations to demonstrate, review, and take responsibility for performance, both the results achieved in light of agreed expectations and the means used. (Source: Auditor General December 2002 Report—Modernizing Accountability in the Public Sector)

2.39 The detailed objectives were to determine

- whether there is provision for clear roles and responsibilities,
- whether there is provision for clear performance expectations,
- to what extent provision is made for credible reporting,
- to what extent provision is made for reasonable review and adjustment,
- whether there is credible reporting, and
- whether there is reasonable review and adjustment.

2.40 Our audit focussed mainly on two key departments responsible for implementing programs that have impacts on road transportation in urban areas, namely, Transport Canada and Natural Resources Canada (NRCan). Specifically, we examined Transport Canada's Moving On Sustainable Transportation program and its Intelligent Transportation Systems initiative, and NRCan's Canadian Transportation Fuel Cell Alliance program. We did not, however, undertake a grants and contribution audit of the programs examined herein.

2.41 In addition, our audit included an examination of the involvement of Environment Canada and Health Canada in connection with our case study on changing people's transportation behaviour to reduce their negative impact on the environment.

2.42 For more information on our audit, see About the Audit at the end of the chapter.

Observations and Recommendations

Moving On Sustainable Transportation program

Promoting education and awareness

2.43 In 1999 Transport Canada launched the Moving On Sustainable Transportation (MOST) program as a three-year, $1 million initiative. This was one of the specific commitments made in the Department's first

sustainable development strategy (1997). In January 2002, the program was extended to 2007, with an additional $2.5 million for the second phase, bringing the total funding to $3.5 million over eight years. The Department has identified the MOST program as a key initiative for enhancing Canadians' awareness of sustainable transportation.

2.44 The primary objectives of the MOST program are to

- stimulate the development of innovative tools, approaches, and practices for increasing the sustainability of Canada's transportation system;
- realize quantifiable environmental and sustainable development results on Transport Canada's sustainable development priorities; and
- provide Canadians with practical information and tools for better applying sustainable transportation thinking in their daily lives.

Intelligent Transportation Systems initiative

A tool for improving transportation in urban areas

2.45 An efficient transportation infrastructure is essential to allow the smooth movement of people and goods. One means of achieving this is through the use of intelligent transportation systems (ITS). The use of ITS technology can

- improve the quality of traffic management, traveller information and vehicle control, commercial vehicle and fleet management, and public transit;
- help manage and reduce congestion, minimize delays for vehicle traffic, detect and reduce the risk of accidents, and monitor highway conditions; and
- enable transportation operators and users to optimize the potential of existing resources and to better integrate services, without necessarily altering the existing infrastructure.

Highway advisory sign that informs drivers of existing traffic conditions

Source: Transport Canada

2.46 Transport Canada launched its Intelligent Transportation Systems Plan for Canada in November 1999. The national plan is built on five interconnected components: partnerships for knowledge, development of a national ITS architecture, a multimodal research and development plan, deployment and integration of intelligent transportation systems across Canada, and strengthening of Canada's ITS industry (through development of potential products and services for export).

Toll collector devices for vehicles merging onto a toll roadway

Source: Transport Canada

2.47 Our audit focussed on the deployment and integration component, given that one of its objectives is to reduce environmental impacts, including air emissions, and increase the use of alternative transportation modes. The federal government has made available, under Transport Canada's Strategic Highway Infrastructure Program (SHIP), up to $29 million for the ITS Plan. Departmental officials informed us that a significant portion of this amount is expected to be allocated for deployment and integration activities.

2.48 Of the 16 ITS deployment and integration projects funded under SHIP in 2002, our audit covered the 6 projects that were led by urban municipal governments or their agencies and that focussed on improving road traffic operations. The ITS deployment and integration component offered these municipal applicants cost-sharing contributions of up to 50 percent of eligible costs, to a maximum contribution of $250,000 per project.

2.49 A Transport Canada document for SHIP recognized that ITS technologies are an innovative approach to realizing key government objectives. These objectives include the achievement of national environmental goals, such as the reduction of greenhouse gas emissions by decreasing fuel consumption. This document stated that, among the various SHIP components, the ITS component is likely to have the highest overall environmental benefit. The ITS initiative would have a positive impact on air quality, though the decrease in greenhouse gas emissions would be small on a national scale. The ITS Plan indicated that a study commissioned by the Transportation Climate Change Table on the impact of certain ITS applications on greenhouse gas emissions estimated the reduction in emissions to be about 0.75 megatonnes in 2010. This reduction is comparable to the reductions for some of the actions within the transportation sector, noted in Appendix A.

Canadian Transportation Fuel Cell Alliance program

Advancing the technology

2.50 The Canadian Transportation Fuel Cell Alliance (CTFCA) program, launched in June 2001, is a five-year $23 million initiative administered by Natural Resources Canada as part of Canada's Action Plan 2000 on Climate Change. The program involves hydrogen fuel cell suppliers, fuel providers, the automobile industry, and government.

2.51 The objective of the CTFCA program is to demonstrate and evaluate viable fuelling systems for hydrogen fuel cell vehicles and to develop the necessary supporting framework for the fuelling infrastructure. The program is also expected to demonstrate options for refuelling, address regulatory barriers to the increased use of fuel cell vehicles, establish safety standards for fuelling stations, and develop training and certification programs for people who will install and maintain those stations.

A hydrogen fuel cell system

Source: picture taken by Office of the Auditor General, at General Hydrogen

Prototype fuel cell vehicle

Source: Ballard Power Systems Inc.

Fuelling station

Source: picture taken by Office of the Auditor General, at BC Hydro's Powertech facility

2.52 An objective and a long-term outcome of the program is to shorten the time frame for reducing greenhouse gas emissions in the transportation sector through increased energy efficiency of vehicles and the use of low or zero carbon fuels. Natural Resources Canada estimates that this program will reduce net greenhouse gas emissions by 0.09 megatonnes in 2010 and 2.65 megatonnes in 2020, if hydrogen is produced from the reforming of methane (a carbon-based fuel). This represents only 0.05 percent and 1.2 percent of the transportation sector's projected emissions in 2010 and 2020 respectively.

2.53 In March 2003, Natural Resources Canada announced the first two demonstration projects under this program. One project will develop a hydrogen refuelling apparatus for a natural gas reformer that will be capable of generating hydrogen for both fuel cell vehicles and stationary power generators. The other project will help develop electrolysis technology in a mobile hydrogen fuelling station to generate hydrogen from water.

Accountability results for the programs audited

Roles and responsibilities have been clearly defined

2.54 All three programs we examined provide for clearly defined, understandable, and agreed-upon roles and responsibilities. These include setting out clearly what activities and tasks are expected of each party and how the relationships are to be managed.

2.55 We interviewed key personnel and reviewed departmental and other documents to identify provisions accompanying the assignment of responsibilities and contribution of funds to projects. We reviewed agreements and management frameworks and found that decision-making processes and co-ordination between program staff and funding recipients were clearly set out.

Concerns about performance expectations

2.56 The three programs all have stated performance expectations. However, we found shortcomings that may hinder the departments' ability to meet their expectations. Our examination included reviews of management and accountability frameworks, as well as internal program or project assessments, as appropriate.

2.57 In the case of the Moving On Sustainable Transportation (MOST) program, we would have expected the Department to have developed some approaches to determine how successful the program had been. The objectives of the program, described in paragraph 2.44, include stimulating innovative tools, approaches, and practices for Transport Canada's sustainable development priorities and communicating that information to Canadians. However, there are no clear and concrete performance targets for the outcomes of the overall program, although we found targets have been established at the project level. Practical targets at the program level could be set in a number of ways. One target could entail expecting that all projects—successes and failures—produce reports on lessons learned and communicate this information to Canadians. Another target could entail establishing a success rate for each round of project funding in terms of the percentage of

projects that met their stated objectives, including those projects associated with reducing greenhouse gas emissions and pollution from the transportation sector. Without establishing a success rate and knowing the actual extent of success, Transport Canada will find it difficult to assess whether the program is making progress against its stated objectives.

2.58 Transport Canada provides a link between the MOST program's intermediate outcomes and Challenge 1 of its Sustainable Development Strategy 2001–2003—to "improve education and awareness of sustainable transportation." The Department intends to address this challenge in part through the MOST program. It indicates that Challenge 1 targets for the MOST program have been achieved. These targets involved extending the program by two years, undertaking a review, and implementing a targeted marketing campaign. However, we found that these targets are not quantifiable or outcome-oriented, and they do not help to determine whether Challenge 1 of the Sustainable Development Strategy has been achieved. If this challenge is to be carried forward into Transport Canada's next sustainable development strategy, we would expect the Department to develop targets that are quantifiable and outcome-oriented.

2.59 **Recommendation.** Transport Canada should ensure that the Moving On Sustainable Transportation program has clear and concrete performance targets in which to assess progress against its stated objectives.

Transport Canada's response. Transport Canada accepts the recommendation.

The Department currently assesses progress against MOST's stated objectives through processes outlined in the Results-based Management and Accountability Framework that has been approved by the Treasury Board. This includes rigorous project-level reporting against established goals, indicators, and quantitative targets as well as reporting on program-level performance indicators. The MOST program will aggregate individual project reports into an annual program report beginning in fall 2003 to provide an overview of overall program progress.

The Department agrees with the desirability of having performance targets at the program level where feasible, but it feels the lack of such targets has not had a detrimental impact on the Department's ability to assess the progress of MOST against its stated objectives. It believes that the current reporting requirements and assessment of results are appropriate and effectively inform the Department on how well the program is functioning.

In seeking to extend MOST beyond its expiration (31 March 2007), Transport Canada will introduce practical and feasible program-level performance targets that are consistent with the overall purpose of the program. A key challenge will be to ensure that such targets reflect the program's multiple objectives and do not result in a reduction in the diversity of program submissions. The impact of program-level targets on the integrity of the selection process will also have to be considered.

If the program is extended beyond 2007, Transport Canada will introduce program-level targets in the context of the Treasury Board submission by 31 March 2007.

2.60 The Intelligent Transportation's Systems (ITS) Plan identifies eight objectives, one of which is "reduce energy and environmental costs associated with ground transportation." It also identifies various means to meet this objective, including decreasing fuel consumption and harmful emissions by improving traffic flow. The ITS Applicant's Guide for the deployment and integration component of the Plan also identifies six specific objectives that can be linked to the Plan objectives, one of which is to "reduce environmental impacts, including air emissions, and increase the use of alternative transportation modes." The six projects we examined identified the reduction of air emissions as a project benefit associated with an environmental objective within the project proposal.

2.61 Transport Canada signed a standard contribution agreement with each of the six project proponents for deployment and integration of ITS. In addition to the provisions of the standard agreement, the project contribution agreement incorporates the project proposal by reference and thereby the environmental project objective to be advanced. We would have expected to see concrete performance expectations related to environmental impacts for these projects, including the benefits of reducing air emissions. However, there were no such expectations. Therefore, we are concerned that the Department may not be able to demonstrate the contribution of each project to the environmental objective of the ITS Plan.

2.62 **Recommendation.** Given that one of the objectives of the deployment and integration component of the Intelligent Transportation Systems (ITS) initiative is to reduce environmental impacts, including air emissions, and increase the use of alternative transportation modes, Transport Canada should ensure that, where applicable, the ITS projects it supports have clear and concrete environmental performance expectations.

Transport Canada's response. Transport Canada accepts the recommendation with qualification.

Provision for the measurement of emissions reduction should be contained in those project proposals that have the reduction of fuel emissions as a stated objective. However, it is the Department's view that, due to the newness of ITS technologies and the variability of the applications, there is not yet sufficiently precise knowledge of the relationship between ITS deployments and their environmental impacts to require project proposals to specify an exact quantum as a target for emissions reduction.

Transport Canada is drawing on expert advice to review the six projects examined in order to find ways—either direct or indirect—to measure emissions reductions. In addition, the Department is developing guidelines for the development of fuel emissions reduction measures for use by proponents in future calls for proposals for ITS deployments.

These actions are expected to be completed by the end of December 2003.

2.63 Although the Canadian Transportation Fuel Cell Alliance (CTFCA) program sets out clear and concrete performance expectations, we are concerned about whether the program's activities can be completed and its expected outcomes met by its target dates. For example, the CTFCA program expects to have five vehicle fuelling facilities built by March 2005 and to have data available on their operation by March 2006. However, the CTFCA program is dependent on other sources of funding for the purchase of fuel cell vehicles. Currently, the CTFCA program will have only five fuel cell vehicles and one fuel cell bus available for demonstration purposes. Departmental officials acknowledge that more vehicles will be required to fully demonstrate the planned fuelling stations.

2.64 We noted that the 2001–2002 CTFCA Annual Report identified the lack of availability of fuel cell vehicles as an issue for the fuelling demonstration working groups dealing with light- and heavy-duty vehicles. Our case study below highlights this issue and other industry sector challenges that may also inhibit the achievement of expected outcomes.

The future for fuel cell technology and hydrogen in Canada

Government and industry believe that the widespread use of fuel cell technology and hydrogen are promising solutions to reduce emissions from road transportation. Although there are many potential social, environmental, and economic benefits, significant challenges remain.

Potential benefits

The anticipated social benefits associated with the use of hydrogen fuel cells in transportation are primarily improvements to human health through reduced urban air pollution (smog), since emissions from hydrogen fuel cell vehicles—heat and water—are environmentally benign. Fuel cell vehicles could also help address climate change and other environmental issues, such as reducing groundwater contamination and urban noise pollution. In addition, hydrogen fuel cell technology could represent an economic opportunity for Canada by enhancing the overall competitiveness of our economy and by providing new opportunities for other key industry sectors, a platform for growth in high-value exports, and significant growth in knowledge-based jobs.

Important consideration—The source of hydrogen

Although emissions from hydrogen fuel cell vehicles are environmentally benign, greenhouse gases and other pollutants associated with the production of hydrogen can vary significantly. Key determining factors are the technology used to produce hydrogen and the primary source of fuel used to produce the hydrogen. Hydrogen can be produced from non-renewable sources of energy such as methanol or natural gas (carbon-based fuels) and nuclear power, or from renewable sources of energy such as water, wind, and the sun. The federal government recognizes that the key to the "hydrogen economy" will be the development of clean, efficient energy sources to produce hydrogen.

Challenges

Canada's fuel cell industry has identified a number of significant challenges. These include the following:

- developing infrastructure for fuelling hydrogen vehicles;
- developing uniform industry codes and standards to govern product quality, safety, and component specifications;

The future for fuel cell technology and hydrogen in Canada (continued)

- lowering production costs of fuel cells to be cost-competitive with conventional power sources;
- securing long-term financing to conduct the research and development needed to resolve technical issues and undertake demonstration projects; and
- demonstrating, for the purposes of investment, the economic, environmental, and social benefits of fuel cells.

The "catch 22" problem—An unresolved issue in Canada

Beyond these specific challenges, a more fundamental issue is the "catch 22" problem. A large number of fuel cell vehicles require a supportive infrastructure. However, justifying substantial expenditures on building such an infrastructure may be difficult unless there are a significant number of fuel cell vehicles on the road. The private sector may be discouraged from investing in the required infrastructure until the nature and timing of the demand is better known.

This problem is an unresolved issue in Canada. The Canadian Transportation Fuel Cell Alliance program supports demonstration projects for hydrogen fuelling infrastructure; however, there are no comparable programs addressing the availability of fuel cell vehicles.

Governments have played a role in supporting the fuel cell industry

Federal, provincial, and municipal governments nurtured the Canadian fuel cell industry through its early stages and have played a role in the industry's success to date. From 1982–2002, government support to the Canadian fuel cell industry totalled about $179 million in grants, contributions, and loans. Up to 1999, the federal government alone invested or committed over $100 million, mainly in support of research and development for fuel cells and fuel cell systems in Canada.

Canada is currently among the global leaders

Canada has achieved a reputation as a world leader in hydrogen fuel cell technology. Other countries and regions, such as the European Union, Japan, and the United States, are also implementing policies and programs promoting the accelerated commercial use of these technologies. They too have emerged as leading developers of fuel cell technology. A study conducted for the fuel cell industry suggests that if Canada's rate of innovation can be sustained, Canadian companies will be in a strong position to secure a share of the growing market for fuel cells.

A federal commitment to innovation

In February 2002, the federal government launched Canada's Innovation Strategy, with the overall objective of moving Canada to the front ranks of the world's most innovative countries. One of the strategy's stated priorities is federal investment in infrastructure, research, and multi-stakeholder partnerships to realize Canada's potential to be globally competitive in fuel cell technology.

The federal government is considering a national strategy

A joint government-industry publication, the Canadian Fuel Cell Commercialization Roadmap, identified the need for a comprehensive national strategy for hydrogen fuel cells that focusses on maintaining Canada's competitiveness in the face of growing global competition. Federal officials informed us that the federal government is considering such a strategy, but no firm commitment has been made.

A federal leadership role

While fuel cell technology and hydrogen have many potential benefits, significant challenges remain. The federal government has yet to decide on what leadership role it is going to play in addressing these challenges and, if appropriate, what long-term commitments are necessary.

Intelligent Transportation Systems projects lack provision for credible reporting on environmental impacts

2.65 Both the Moving On Sustainable Transportation program and the Canadian Transportation Fuel Cell Alliance program have appropriate provisions in place for credible reporting. They specify what information is to be reported, by whom, and when, and how information is to be collected, verified, and analyzed.

2.66 Although the contribution agreements for the six urban Intelligent Transportation Systems (ITS) projects define detailed reporting requirements, we noted that there is no provision for credible reporting on environmental impacts. A Transport Canada document for the Strategic Highway Infrastructure Program (SHIP) stated that Transport Canada should collect and maintain data on the environmental impacts of SHIP. These impacts include the reduction of greenhouse gas emissions. However, the reporting requirements of the standard contribution agreement do not make explicit provision for reporting on how well environmental objectives have been achieved. This has created a shortcoming between the environmental performance objective of the ITS Plan and those of the ITS projects. As a consequence, Transport Canada may find it difficult to measure progress against the environmental objective of the ITS Plan.

2.67 **Recommendation.** Given that one of the objectives of the deployment and integration component of the Intelligent Transportation Systems (ITS) initiative is to reduce environmental impacts, including air emissions, and increase the use of alternative transportation modes, Transport Canada should ensure that, where applicable, the contribution agreements for its ITS initiative include a clear provision that requires reporting on this objective.

Transport Canada's response. Transport Canada accepts the recommendation.

Although the standard contribution agreement template does require reporting on the achievement of project objectives, it does not make explicit provision for reporting, where applicable, on how environmental objectives were measured and on how well they have been achieved. Accordingly, the applicant's guide for ITS deployments will be modified to require, where applicable, such detail in the reporting on the achievement of the environmental objective.

This action is expected to be completed by the end of December 2003.

Appropriate provision for reasonable review and adjustment has been made

2.68 Appropriate provision for reasonable review and adjustment had been made for all three programs that we examined. We examined documents and conducted interviews with program managers to identify processes for review and, where necessary, adjustment of program operations. This included specifying by whom, how, and when performance will be reviewed and analyzed relative to program expectations. For example, an internal audit of the ITS Plan is scheduled for 2003. A comprehensive program evaluation of

the Strategic Highway Infrastructure Program, including the ITS component, is required to be undertaken in 2005.

Giving an account through credible reporting and being held to account through reasonable review and adjustment

2.69 Although the Moving On Sustainable Transportation (MOST) program has completed four years of operation, program staff have not yet prepared an annual roll-up report of project outcomes, as required by the program's accountability framework. The lack of clear and concrete performance expectations makes it difficult to roll up project results into program results to get an overall picture of what the MOST program has achieved. Departmental officials informed us that they have recently developed a framework for the annual roll-up of project results for phase 2 of the program.

2.70 Overall, the MOST program has undergone reasonable review and adjustment. Project results are reviewed by MOST staff, and program changes have been implemented between phases 1 and 2. Transport Canada completed a program evaluation in June 2001 and an internal audit of the program in November 2002. We found that both the program evaluation and internal audit reports were of sufficient quality to address issues related to the management of the MOST program, given its size and, in the case of the evaluation, its short period of operation. The Department prepared an action plan in August 2001 to address recommendations of the evaluation, while the internal audit report included an action plan to address its recommendations. We noted that both action plans lacked time frames for completing the commitments, although many of the commitments in the action plan for the program evaluation are already completed. We would expect Transport Canada to establish target dates for completing all the remaining commitments made in these action plans.

2.71 One of the remaining commitments in the action plan for the evaluation of the MOST program was to update Transport Canada's Web site to include a section on individual project results. This section was to highlight lessons learned and provide links to online tools and contact names for those interested in more information. The MOST program is now in its sixth round of funding in four years; however, at the time of our audit, the Department had not updated its Web site to include project results from the MOST program. Given that one of the stated objectives of the MOST program is to provide Canadians with practical information and tools for better applying sustainable transportation thinking in their lives, we would expect project results to be made available in a timely manner.

2.72 The six Intelligent Transportation Systems projects that we examined and the two demonstration projects under the Canadian Transportation Fuel Cell Alliance program had not progressed sufficiently to assess them fully. Thus, we were unable to assess the extent to which they are giving an account through credible reporting and being held to account through reasonable review and adjustment. However, we would expect that as these projects and their funding programs progress, departmental officials would

ensure that credible reporting and reasonable review and adjustment take place. Credible reporting is particularly important for determining the overall success of these programs—including their contribution to reducing Canada's greenhouse gas emissions.

2.73 Summary of accountability results. Exhibit 2.3 summarizes the results of our examination of the accountability framework and our assessment of whether accountability is actually occurring (giving an account and holding to account) for the three federal programs described earlier.

Exhibit 2.3 **Summary of accountability results for three federal programs examined**

Accountability framework	MOST	ITS	CTFCA
Provision for clear roles and responsibilities	●	●	●
Provision for clear performance expectations	◓	◓	◓
Provision for credible reporting	●	◓	●
Provision for reasonable review and adjustment	●	●	●

Giving an account and holding to account	Most	ITS	CTFCA
Actual credible reporting	◓	○	○
Actual reasonable review and adjustment	●	○	○

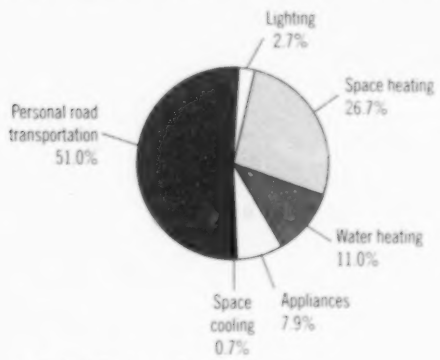
● Appropriate ◓ Improvement required ○ Unable to assess since the program had not progressed sufficiently

MOST – Moving On Sustainable Transportation (Transport Canada)
ITS – Intelligent Transportation Systems (Transport Canada)
CTFCA – Canadian Transportation Fuel Cell Alliance (Natural Resources Canada)

Changing people's transportation behaviour

2.74 Individual Canadians generate about a quarter of Canada's greenhouse gas emissions; about half of their emissions are from personal road transportation (Exhibit 2.4). Vehicles also produce about half the air pollutants, including particulate matter and ground-level ozone, which contribute to smog. In its Climate Change Plan for Canada, the government is calling on all Canadians to reduce their individual greenhouse gas emissions by about 20 percent, or one tonne, from the approximately five tonnes each produces annually.

Exhibit 2.4 Sources of personal greenhouse gas emissions in Canada, 2001



Source: Natural Resources Canada

2.75 Initiatives focussed on changing people's transportation behaviour, in conjunction with technological solutions, are an integral part of the federal government's strategy to reduce greenhouse gas emissions and to achieve sustainable transportation. This strategy involves promoting concrete actions that individuals can take to reduce the adverse impacts of transportation and improve quality of life. Our case study below looks at some promising practices that provide Canadians with information on how they can contribute to reducing transportation emissions. The case study also highlights factors viewed by both departmental officials and project proponents as contributing to the success of such initiatives.

Changing people's transportation behaviour—Promising practices

The transportation behaviour of individual Canadians can have a significant impact on the environment. For example, using a vehicle instead of more sustainable or environmentally friendly transportation options (such as walking, bicycling, or public transit) and idling a vehicle add emissions to our atmosphere. This in turn deteriorates air quality and contributes to climate change and smog. Canadians' individual choices about the vehicles they drive and when they use them can make a substantial difference in transportation emissions.

We looked at three initiatives that received federal funding and whose focus was on changing people's transportation behaviour, namely the Active and Safe Routes to School Program, the Off Ramp—Secondary School Vehicle Trip Reduction Program, and the Turn it Off—Reducing Vehicle Engine Idling pilot project (see Appendix B for a more detailed overview of these initiatives). Environment Canada provided funding to all three initiatives through the Public Education and Outreach component of the Climate Change Action Fund, and Health Canada contributed funding to the Active and Safe Routes to School Program through its Physical Activity Unit. These initiatives were delivered by non-governmental organizations.

Active and Safe Routes to School (A&SRTS)

The A&SRTS program is a national program that encourages the use of active modes of transportation, such as walking and cycling to and from school. Active transportation can help to reduce the number of daily vehicle trips, thereby reducing the amount of emissions released into the atmosphere and improving the health of Canadians through increased physical activity.

In 2002, the proponent for this project estimated that over 250,000 students from 1,432 out of about 12,000 elementary schools in Canada participated in the International Walk to School Day, a component of the A&SRTS program.

Changing people's transportation behaviour—Promising practices (continued)

Off Ramp

The Off Ramp program, which was piloted in several Greater Vancouver and Victoria area secondary schools, provided a long-term focus for developing strategies to get students to walk, cycle, skateboard, in-line skate, take public transit, and carpool to school. To raise awareness of transportation issues, the program hosted school events that offered opportunities and incentives to try transportation alternatives to the personal vehicle, and it worked to overcome barriers to adopting transportation behaviour that is more sustainable. This program promoted its message to over 12,000 secondary students and teachers.

In 2000, the Off Ramp program received an award from the Organization for Economic Cooperation and Development (OECD) for best practice in Environmentally Sustainable Transport, Education and Youth Category.

Turn it Off

The Turn it Off pilot project sought to encourage motorists to avoid idling their engines while waiting in their vehicles at pick-up and drop-off sites at Toronto schools and at Toronto Transit Commission terminals. Overall, this pilot project reduced the incidence of engine idling by 32 percent and the duration of idling by 73 percent.

Natural Resources Canada (NRCan) has been implementing a national anti-idling program and has developed an Idle-Free Zone Web site (http://oee.nrcan.gc.ca/idling/). This Web site provides municipalities with information and tools they can use to take action in reducing vehicle idling at the local level. The NRCan program and the Turn it Off pilot project have many features in common. Anti-idling pilot projects have also been conducted in Mississauga and Sudbury.

Source: picture taken by Office of the Auditor General

Factors viewed as contributing to the success of such initiatives

Departmental officials and project proponents identified a number of factors that contribute to the success of initiatives focussed on changing people's behaviour:

- forming community-based partnerships, since the involvement of other organizations can help secure financial and in-kind contributions as well as promote the initiative;
- securing various sources of funding, including from the federal government, in part because it increases the credibility of the initiative;
- ensuring that the design of the initiative provides for flexibility to allow adaptation to unanticipated obstacles and challenges;
- using incentives and tools such as community-based social marketing, since awareness and information campaigns may not be very effective on their own;
- finding project co-ordinators to assist in the delivery of the project where multiple locations are involved; and
- identifying and overcoming infrastructure and social barriers to active transportation. For example, people may not want to ride their bicycles if the roads do not have designated lanes.

Importance of multi-year funding

Multi-year funding is particularly important since it generally takes some time to achieve habitual and permanent change in people's behaviour. A national program proponent indicated that it is sometimes preferable to have funding spread out over several years so that organizations can better plan for the medium and long term. It may also be easier for organizations to find other funding partners if longer-term funding is secured.

A call for more federal promotion of successful initiatives

When asked about the role of the federal government in initiatives focussed on changing people's transportation behaviour, key players indicated that, in addition to providing financial support, the government could do more to promote these types of initiatives. For example, project information is not always available on the federal government Web site(s). In cases where an organization lacks the resources to maintain its own Web site, it relies on the federal government to help communicate successful approaches, tools, and results.

Promotion of initiatives can, in turn, further assist with replication. A good measure of the success and sustainability of an initiative is whether or not it has been replicated. The three initiatives that we examined have been replicated, or replication is in the planning stages.

Did you know?

- Number of seconds of idling your vehicle that uses more fuel than turning off your engine and restarting it: **10**
- Number of litres of gas used in a year, on average, by idling a vehicle for 10 minutes a day: **100**
- Annual cost of idling for 10 minutes a day at 70 cents a litre: **$70.00**

2.76 In improving public awareness of sustainable transportation, the ultimate goal of the initiatives in our case study and of the Moving On Sustainable Transportation program is behaviour change. When individuals understand the effects of their transportation behaviour, they can in turn make choices that reduce the need for resources and minimize the adverse impacts of transportation. Part of the solution involves building demand for sustainable transportation choices, making sustainable forms of transportation more attractive to Canadians, and reducing the adverse impacts of vehicle use.

Conclusion

Some accountability provisions need to be improved

2.77 The transportation sector, in particular road transportation, is a major source of Canada's greenhouse gas emissions, and the federal government expects this sector to assume its share of responsibility for meeting Canada's Kyoto target. All of the federal government's actions under Action Plan 2000 and the Climate Change Plan for Canada to reduce greenhouse gas emissions in the transportation sector involve partnering with other levels of government or other stakeholders. Therefore, it is critical that the federal government develop partnership agreements with a strong accountability framework, and that all partners, including the federal government, be held to account for achieving their stated performance expectations.

2.78 In general, reasonable accountability frameworks are in place for the three programs we examined—Transport Canada's Moving On Sustainable Transportation (MOST) program and its Intelligent Transportation Systems (ITS) initiative, and Natural Resources Canada's Canadian Transportation Fuel Cells Alliance program. However, we found some shortcomings that may inhibit the achievement of performance expectations. Provision for credible reporting on environmental impacts is also lacking for the ITS projects examined. In addition, for the MOST program, we are concerned that program staff have not yet prepared a report on the roll-up of project outcomes into overall program results, although a framework for doing so has been developed for phase 2 of the program.

2.79 These concerns, if not corrected, will make it difficult for the federal government to determine the overall success of these programs—that is, to assess the contribution they are making to their stated outcomes, including reducing Canada's greenhouse gas emissions.

2.80 The Intelligent Transportation Systems initiative and the Canadian Transportation Fuel Cell Alliance program had not progressed sufficiently to enable us to assess the extent to which accountability was actually occurring in these programs.

2.81 Now that Canada has ratified the Kyoto Protocol, it is expected that the federal government will continue to move forward with its initiatives in the transportation area to address the climate change challenge. As it does so,

it will be imperative that the government know the extent to which its initiatives are contributing to its overall objective of reducing Canada's greenhouse gas emissions and to meeting Canada's climate change commitments.

About the Audit

Objectives

The overall audit objectives were to determine whether

- appropriate accountability frameworks are in place for federal programs associated with road transportation in urban areas and for the resulting partnerships that are derived from them, and
- accountability is occurring for the programs covered by the audit.

The detailed objectives were to determine

- whether there is provision for clear roles and responsibilities,
- whether there is provision for clear performance expectations,
- to what extent provision is made for credible reporting,
- to what extent provision is made for reasonable review and adjustment,
- whether there is credible reporting, and
- whether there is reasonable review and adjustment.

Scope and approach

Our audit focussed mainly on two key departments responsible for implementing programs and initiatives that have impacts on road transportation in urban areas, namely, Transport Canada and Natural Resources Canada. The audit also examined the involvement of Environment Canada and Health Canada in connection with our case study on changing people's transportation behaviour to reduce their impact on the environment.

We reviewed Transport Canada's Moving On Sustainable Transportation (MOST) program, including the MOST component of the Department's sustainable development strategy. We also examined the deployment and integration component of Transport Canada's Intelligent Transportation Systems (ITS) initiative. In Natural Resources Canada, we examined the Canadian Transportation Fuel Cell Alliance (CFTCA) program.

We carried out two case studies that addressed challenges to developing hydrogen fuel cell technology in Canada and to changing people's transportation behaviour. For the latter case study, we examined three initiatives: the Active and Safe Routes to School Program, the Off Ramp—Secondary School Vehicle Trip Reduction Program, and the Turn it Off—Reducing Vehicle Engine Idling pilot project.

In carrying out our audit, we interviewed departmental officials and other key stakeholders; we reviewed departmental files as well as project reports and other documentation, including relevant orders-in-council, program terms and conditions, and contribution agreements; and we analyzed data. In addition, we carried out site visits in the Toronto area, related to ITS deployment projects, and in the Vancouver area, mainly in connection with our case study on hydrogen fuel cells. We did not undertake a grants and contribution audit of the programs examined herein. For example, we did not look at whether the programs comply with the *Financial Administration Act* and the Treasury Board policy on transfer payments; nor did we look at project monitoring.

Some quantitative information is this chapter is based on data drawn from various federal and other sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited, unless otherwise indicated in the chapter. Environment Canada prepares Canada's official national greenhouse gas inventory. The greenhouse gas emissions data it produces are estimates only but are prepared using international guidelines.

Scope limitations. This audit did not include a review of air, marine, and rail transportation modes; nor did it include inter-city public transit or the movement of freight. We also excluded initiatives internal to federal government operations, such as those related to the management of federal vehicle fleets.

Criteria

Given our audit objectives' focus on accountability, our audit criteria were taken from the Office of the Auditor General's December 2002 Report, Chapter 9—Modernizing Accountability in the Public Sector.

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Appendix A Actions within the transportation sector in the Government of Canada Action Plan 2000 on Climate Change and in the Climate Change Plan for Canada

Actions underway or proposed	Lead department(s)	Funds ($ millions)	Expected reductions in greenhouse gas emissions by 2010 (megatonnes)	Means by which the federal government expects to achieve this action
Action Plan 2000 on Climate Change				
• Development and demonstration by the Canadian Transportation Fuel Cell Alliance of refuelling technologies and infrastructure for commercialization of fuel cell vehicles	Natural Resources Canada	$23	0.09	Through government and industry actions
• Negotiations for 25 percent improvement in the fuel efficiency for new vehicles by 2010	Natural Resources Canada and Transport Canada	$16	5.2	Negotiation with automotive manufacturers
• Increased ethanol production to support introduction of ethanol blending in 25 percent of gasoline supply, also known as the Future Fuels Initiative	Natural Resources Canada and Agriculture and Agri-food Canada	$3	0.8	Building on the current federal and provincial excise tax exemptions on the ethanol portion of gasoline, and federal funding for research and development (R&D) and for the use of ethanol in the federal fleet
• Demonstration of integrated strategies, technologies, and planning to reduce urban transportation emissions by the Urban Transportation Showcase Program	Transport Canada	$40	0.8	Through all levels of government, as well as private-sector and non-governmental initiatives
• Negotiation of voluntary agreements with air, rail, truck, and marine sectors to improve fuel efficiency of goods transport	Transport Canada and Natural Resources Canada	$14	2.0	Federal government working with the provinces, territories, and industry to negotiate voluntary performance agreements
Action Plan 2000 total		**$96**	**8.9**	

Actions underway or proposed	Lead department(s)	Funds ($ millions)	Expected reductions in greenhouse gas emissions by 2010 (megatonnes)	Means by which the federal government expects to achieve this action
Climate Change Plan for Canada				
• Consumer action to improve vehicle efficiency, including off-road vehicles	Not specified in the Climate Change Plan—assumed to be Natural Resources Canada		0.8	Federal government enhancing public information programs
• Increasing the target for ethanol blending to 35 percent of gasoline supply, and setting a target of 500 million litres of biodiesel in use by 2010	Not specified in the Climate Change Plan—assumed to be Natural Resources Canada and Agriculture and Agri-food Canada		2.0	Federal government working with provinces, territories, and stakeholders using a variety of tools such as incentives, standards, and R&D
• Increased use of public transit, alternative approaches to passenger transportation, and sustainable urban planning	Not specified in the Climate Change Plan—assumed to be Transport Canada		7.0	Federal government in conjunction with certain municipal efforts and provincial and territorial actions
• More efficient transport of goods, including intermodal transportation	Not specified in the Climate Change Plan—assumed to be Transport Canada		2.3	Public-private collaboration, including negotiations with associations and industry
Climate Change Plan total		**?**	**12.1**	
Total transportation sector		**$96+**	**21.0**	

Appendix B Overview of selected initiatives for changing people's transportation behaviour

	Active and Safe Routes to School Program	Off Ramp	Turn it Off
Start/end dates	• National program launched in September 1998 • Ongoing program	• Pilot program: March 1999 to March 2001 • Extension: November 2001 to March 2002	• 1 October 1999 to 31 August 2000
Proponent	• Go for Green	• Better Environmentally Sound Transportation	• Lura Consulting
Target audience	• Elementary students • Parents and caregivers • Teachers, school administrators, school boards, and parent councils • Various community groups • Municipal planners and elected officials	• Primary: secondary school students • Secondary: teachers, parents, and the community at large	• Motorists at common passenger pickup points (schools and transit terminal parking lots)
Area covered	• National	• Greater Vancouver and Victoria	• Toronto
Objectives	• To encourage walking, cycling, or other non-motorized modes of transportation as an alternative to vehicle use and thereby improve local air quality • To promote active transportation as part of sustainable transportation initiatives and as a key part of a sustainable lifestyle • To increase the physical activity levels of children/youth • To promote safer and accessible routes for children to walk and cycle to and from school • To increase a sense of community for children	• To develop engaging events offering incentive and opportunity for teens to try walking, cycling, taking transit, and carpooling • To support change in behaviour toward sustainable transportation through infrastructure improvements in secondary schools • To reduce car trips in participating schools by at least 20 percent • To raise awareness of transportation issues, climate change, and air pollution	• To decrease the frequency and duration of motorists idling their vehicle engines
Intended environmental benefits	• Improved air quality and a cleaner environment • Less traffic congestion around schools	• Increased awareness about the impacts of motor vehicles on air quality, health, environment, land use, stress, and quality of life, leading to reduced traffic congestion, air pollution, and greenhouse gas emissions	• Reduction in greenhouse gas emissions • Decrease in effects of climate change • Reduction in smog emissions • Improved air quality

	Active and Safe Routes to School Program	Off Ramp	Turn it Off
Other intended co-benefits	• Increased physical activity for children and youth • Healthier lifestyle for the whole family • Safer, calmer streets and neighbourhoods	• Improved personal health through fitness, road and cycling safety, and better air quality • Improved social health through decrease in the costs of car ownership, in sprawl, and in land lost to parking lots	• Protection of human health • Energy savings • Cost savings
Amount of federal funding	• From December 1998 to March 2001 CCAF[1]: $330,000 Health Canada: $280,000	• From March 1999 to March 2001 Pilot program (CCAF): $98,200 • From November 2001 to March 2002 Extension (MOST[2]): $35,000	• From October 1999 to August 2000 CCAF: $53,500
Other funding, including in-kind contributions	• From December 1998 to March 2001 $4,122,100	• From March 1999 to March 2001 Pilot program: $79,000 • From November 2001 to March 2002 Extension: $44,400	• From October 1999 to August 2000 $32,000
Community participation	• By April 2000, over 1,500 schools were officially registered for some aspect of the A&SRTS program.	Pilot program: • Program co-ordinators made 134 site visits to 13 pilot schools • Program co-ordinators interacted extensively with over 50 student leaders and 15 lead teachers Extension: • Created partnerships with three municipalities	• Partners included the City of Toronto (Works and Emergency Services, Health Department), Toronto District School Board, Toronto Catholic School Board, and the Toronto Transit Commission.

	Active and Safe Routes to School Program	Off Ramp	Turn it Off
Examples of results achieved	• 1998: Go for Green launched the national A&SRTS program and Canada's first national Walk a Child to School Day in which an estimated 16,000 elementary students participated. • 1998: Go for Green made a Response kit available to all interested schools. The kit includes a video, success stories, fact sheets, how-to checklists, and a classroom support tool called "Blazing Trails throughout the Urban Jungle." This tool helps students in grades 3 to 6 get to know their neighbourhood better and map safe routes to their school.	Pilot program results: • Program manual (Off Ramp workbook that provides various details on reducing vehicle trips to secondary schools) • Templates and a starter-kit of program activities and ideas • 9 percent reduction in car trips to participating schools Extension: • Five Off Ramp clubs created • Program Co-ordinator Guidebook produced • Four types of promotional materials produced	• At school sites, the combination of anti-idling signs and motorists' use of a no-idling vehicle window stickers reduced the number of vehicles idling by 51 percent and the duration of idling by 72 percent (relative to the control sites). • At transit sites, the combination of signs and commitment reduced the number of vehicles idling by 27 percent and the duration of idling by 78 percent (relative to the control sites).

1. Climate Change Action Fund
2. Moving On Sustainable Transportation

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2003

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2003

Report of the

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to the House of Commons

Chapter 3

Sustainable Development Strategies: Case Studies

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Chapter

3

Sustainable Development Strategies: Case Studies

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by the Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

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Sustainable Development Strategies: Case Studies

Main Points

3.1 The federal government has made many commitments on the environment and sustainable development. Making these commitments is one thing but achieving and measuring results is another. In this report, we looked at four federal departments to see if they were making progress on commitments they made to Parliament in their 2001 sustainable development strategies. These strategies are important tools that represent the objectives and action plans of departments and agencies for furthering sustainable development.

3.2 Our first case study looks at "green" funding as part of Infrastructure Canada's $2 billion Infrastructure Canada Program. The government intended that at least 47 percent of its funding to this Program would be directed to infrastructure that will improve the environment. Tangible environmental benefits are expected to be achieved before the Program ends. We found that many of the green projects related to potable water that are funded by the program do not have clearly defined environmental benefits. As a result, accounting for these projects as green overstates the portion of funding allocated to improving the quality of the environment. We also found that the expected or actual environmental benefits of the Program have yet to be reported to Parliament.

3.3 Two commitments made by Industry Canada that deal with eco-efficiency and environmental technologies form the second case study. These commitments are about how companies produce goods and services in a sustainable manner and how consumers use them; they are about producing less pollution and using natural resources more wisely. Industry Canada is meeting its commitments, producing a variety of information products, and providing investments to support projects in these areas. It has put in place a system to track the status of its commitments and reports on progress to senior management on a regular basis. The Department needs to improve how it measures and reports on the impact its actions are having on making Canadian industries more sustainable.

3.4 The third case study is on Human Resources Development Canada (HRDC). The Department made commitments related to the impact the Kyoto Protocol to the United-Nations Framework Convention on Climate Change will have on Canadian jobs, green employment, and the skills and knowledge required to make Canada a more sustainable society. HRDC has made limited progress on its commitments and has not put in place an effective performance measurement framework to track its own progress. This

indicates to us that the Department attaches low priority to the objective. Delays prevent Canadians from getting answers to important questions regarding sustainable development and employment issues. Lack of progress also means the Department is not identifying opportunities for changing or adjusting its existing policies and programs to further sustainable development.

3.5 Environment Canada's commitment to improve the integration of federal government programs at the community level is the fourth and final case study. A key target in this regard is the development and implementation of a federal framework that would set out the federal government's vision and strategy for making communities more sustainable. The Department will not meet this commitment by the end of its target completion date of 2003 and has not set a new deadline. Without this framework, it will not be clear where the federal government is heading in terms of helping Canadian communities become more sustainable. The Department is not managing its objective in an effective manner. Improved reporting is needed so Parliament and Canadians can know whether communities are, in fact, benefiting from better integrated programs.

Background and other observations

3.6 These case studies reveal how departments are addressing environment and sustainable development issues and the progress they are making. This includes how they are setting objectives and performance expectations, the rate at which they are implementing commitments, and how they are measuring and reporting on performance.

3.7 The case studies illustrate that sustainable development is not just about the environment, but involves important social and economic issues as well. The case studies also show that sustainable development is not just the responsibility of Environment Canada but involves all federal departments including those with social and economic mandates.

3.8 In 1995, Parliament passed amendments to the *Auditor General Act*, creating a legal requirement that the ministers and heads of 25 government departments and agencies prepare sustainable development strategies and update them at least every three years. An additional four federal organizations have voluntarily produced sustainable development strategies. The first strategies were released in December 1997, followed by a second round in February 2001.

3.9 Amendments to the *Auditor General Act* also created the position of Commissioner of the Environment and Sustainable Development. The Commissioner monitors and reports on the progress of departments and agencies toward sustainable development. The Commissioner also reports on how well federal departments and agencies are meeting the objectives and implementing the plans set out in their sustainable development strategies.

3.10 Because our observations deal with selected objectives they should not be applied to other related issues or used as a basis for drawing conclusions about overall progress toward sustainable development by the federal

government as a whole. They should also not be used to draw conclusions about matters not examined.

The departments have responded. Infrastructure Canada, Industry Canada, and Environment Canada have accepted our recommendations. Human Resources Development Canada generally agrees with our recommendation. The responses of each department, which follow the recommendations in the chapter, indicate what they plan to do.

Introduction

Reporting on progress toward sustainable development

3.11 Since 1998, the Commissioner of the Environment and Sustainable Development has produced several audits on the sustainable development strategies of federal government departments and agencies. These reports have focussed on the implementation of commitments made in the strategies, how the first-round strategies were prepared, the quality of performance reporting, and the question of whether management systems were in place to support the strategies. Past reports have also looked at the nature of the commitments made in the strategies, including the meaningfulness and measurability of the commitments.

3.12 The strategies are based on a hierarchy of commitments. The commitments include broad goals that provide an overall sense of direction. They also include objectives, targets, and actions. Objectives allow departments and agencies to translate broader goals into clearer and more concrete images of the longer-term results and outcomes they are pursuing. Targets and actions are more detailed performance expectations that represent what departments and agencies set out to achieve, especially in the short-term. One of the challenges they face in monitoring and reporting on the sustainable development strategies is the sheer volume of commitments that their strategies contain: the 1997 strategies contain approximately 3,000 commitments while the 2001 strategies, approximately 2,670 commitments.

Focus of the audit

3.13 This year we looked in depth at the results of selected departments on specific objectives from the 2001 strategies. The departments and objectives selected consist of

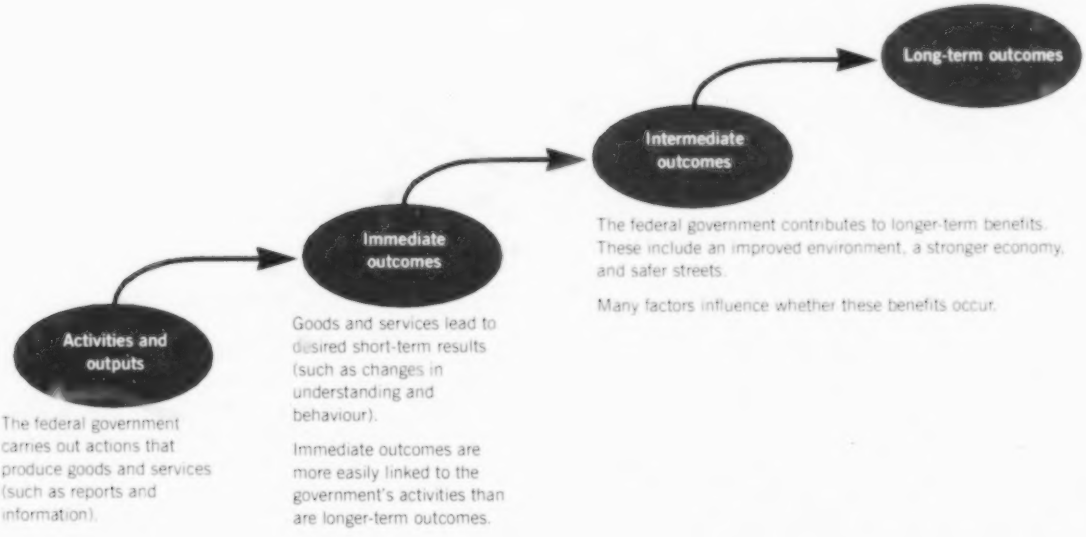
- Infrastructure Canada—improving the quality of the environment by funding infrastructure through the Infrastructure Canada Program;
- Industry Canada
  - helping Canadians, industries, and firms become better able to adopt eco-efficient practices;
  - assisting in the development and widespread use of environmental and enabling technologies;
- Human Resources Development Canada—understanding more fully what sustainable development, including issues such as climate change and green employment, means for the Department's social policies and programs; and
- Environment Canada—promoting sustainable communities through better integration of federal programs.

3.14 We selected these objectives based on their potential impact at the local level, topics covered in past audits, and planned audits. These objectives were also selected because they represent approaches to sustainable development that combine social, economic, and environmental issues.

3.15 To determine whether departments were making progress on their objectives, we looked at whether these organizations were doing what they said they would do and the results they were achieving through those actions. We also looked at how the departments were managing their objectives: whether the objectives and performance expectations clearly state what results are to be accomplished, and whether the departments were measuring and reporting results. Results is a general term that ranges from outputs (such as products and services) to short-term and longer-term outcomes. The linkages between these types of results are often referred to as a results chain (Exhibit 3.1). Regarding the Infrastructure Canada Program, we also looked to see if the Program's objectives and design were consistent with the original objective set in the Treasury Board Secretariat of Canada's sustainable development strategy and whether it was managed to ensure the achievement of its objective. We did not, however, examine the Program from a grants and contributions perspective.

3.16 This report is presented as a series of case studies. In each case, we provide background information on the issue and the related objective(s) being examined, the results being achieved, our concerns with respect to the rate of progress and/or how the objective is being managed, conclusions, and recommendations. Exhibits are used in each case study to summarize our findings. Our reporting emphasizes the matters we considered significant within the context of each case study.

Exhibit 3.1 **The results chain: From activities to outcomes**


Activities and outputs
The federal government carries out actions that produce goods and services (such as reports and information).
Immediate outcomes
Goods and services lead to desired short-term results (such as changes in understanding and behaviour).
Immediate outcomes are more easily linked to the government's activities than are longer-term outcomes.
Intermediate outcomes
The federal government contributes to longer-term benefits. These include an improved environment, a stronger economy, and safer streets.
Many factors influence whether these benefits occur.
Long-term outcomes

Observations and Recommendations

Funding for green infrastructure

Infrastructure Canada: Improving the quality of the environment

3.17 Infrastructure shortfall. Infrastructure refers to a range of public works and physical structures that serve the needs of Canadians. These include roads, bridges, rail and transit ways, communication networks, power generation and distribution facilities, water and wastewater systems, as well as community, cultural, and recreational facilities. Many groups and organizations have commented on Canada's growing infrastructure deficit.

3.18 Canada's increasing population is placing ever-mounting pressures on urban and rural infrastructure to support the quality of life that Canadians expect. As part of these pressures, governments face the critical challenge of making infrastructure investments that address environmental concerns and contribute to improving the quality of Canada's environment.

3.19 The federal government's response. Several federal infrastructure programs and initiatives aimed at improving the country's physical infrastructure have been launched in recent years. They have focussed on areas such as transportation, tourism, telecommunications, culture, health and safety, and the environment. As part of these initiatives, the federal government launched the Infrastructure Canada Program following a promise in the 1999 throne speech to improve physical infrastructure in urban and rural regions across the country.

A distinctly green program

3.20 A clear commitment to improve the environment. The Infrastructure Canada Program is different from most other infrastructure initiatives because it is promoted primarily as a green program. Its first priority is to improve the quality of the environment. Through this program the federal government made a clear and significant commitment to the environment, which it reaffirmed in the Treasury Board of Canada Secretariat's Sustainable Development Strategy 2001–03 (Exhibit 3.2). The Treasury Board Secretariat was responsible for the Program prior to the creation of the Infrastructure Canada department in 2002.

Exhibit 3.2 **The Program's green municipal infrastructure commitment**

Infrastructure Canada's first priority is green municipal infrastructure. It is estimated that at least 47 per cent of the $2 billion federal investment will be directed to infrastructure that will improve the quality of the environment. Investments within the green envelope will include projects related to water and wastewater systems, water management, solid waste management and recycling, and capital expenditures to retrofit or improve the energy efficiency of buildings and facilities owned by local governments.

Source: Treasury Board of Canada Secretariat

3.21 How the Program works. In support of its green priority, the government stated that an estimated minimum 47 percent of the Program's $2 billion total federal funding, or approximately $930 million (not including administrative costs), would be targeted for investments that will improve the quality of the environment. The Program provides funding in response to requests received from municipalities and local governments for assistance with specific infrastructure projects. Projects funded under the Program's green municipal infrastructure component must fall within one of the following five project categories: water and wastewater systems, water management, solid waste management, recycling, and energy efficiency. By design, projects within these categories all count toward the Program's 47 percent green investment target. We examined whether the green component of the Program was designed and is being managed to ensure the achievement of its objective: improving the quality of the environment (Exhibit 3.3).

Exhibit 3.3 **How well is Infrastructure Canada managing its objective?**

What we expected	What we found
Clear results-oriented objective	The objective reflects a clear commitment to improve the quality of the environment.
Clear performance expectations and indicators	The target is clear: a minimum of 47% of total funding to be directed to improve the environment (green municipal infrastructure). The objective is supported by defined program benefits and measures. However, not all green benefits and projects clearly pertain to improving the environment.
Results measurement	A decentralized information system is set up to account and monitor project funding and benefits. Overall program benefits or results have not been compiled or made available.
Effective performance reporting	Infrastructure Canada has yet to report and account for the achievement of expected or actual environmental benefits.

3.22 A federal-provincial/territorial partnership. The federal government delivers the Program in partnership with the provinces and territories, and has ratified contribution funding agreements with each. Federal contributions normally provide 1/3 of the cost of eligible projects, with the balance of the funds matched by the provinces or territories (1/3) and the municipalities or local governments (1/3). While the provinces and territories are primarily responsible for the implementation of approved projects, joint federal-provincial or federal-territorial management committees in each jurisdiction review and select proposed projects and administer the funding agreements.

3.23 In August 2002, Infrastructure Canada was established as a distinct federal department within the Industry portfolio. It co-ordinates and manages a number of the government's infrastructure initiatives, including the Infrastructure Canada Program. It was preceded by the former National Infrastructure Office housed within the Treasury Board Secretariat. In addition, various other federal departments and agencies are responsible for the administration of the Program in different regions of the country (Exhibit 3.4), and represent the Government of Canada on the corresponding program management committees.

Exhibit 3.4 The Infrastructure Canada Program across Canada

Regional delivery agent	Area or population group covered
Western Economic Diversification	British Columbia
	Alberta
	Saskatchewan
	Manitoba
Industry Canada (Ontario region)	Ontario
Canada Economic Development—Quebec	Quebec
Atlantic Canada Opportunities Agency	New Brunswick
	Nova Scotia
	Prince Edward Island
	Newfoundland and Labrador
Indian and Northern Affairs Canada	Northwest Territories
	Yukon
	Nunavut
	First Nations

Source: Infrastructure Canada Program

Program expected to produce tangible environmental benefits

3.24 The Infrastructure Canada Program is intended to provide funding over a six-year period, from 2000–2001 to 2005–2006. In 2000, the Program's first year of operation, efforts were mainly directed at setting up the Program and negotiating the funding agreements with the provinces and territories. Also, Infrastructure Canada set up a decentralized information system to account and monitor funding and benefits across all project categories and provinces and territories. The review, selection, and approval of projects began in earnest in 2001.

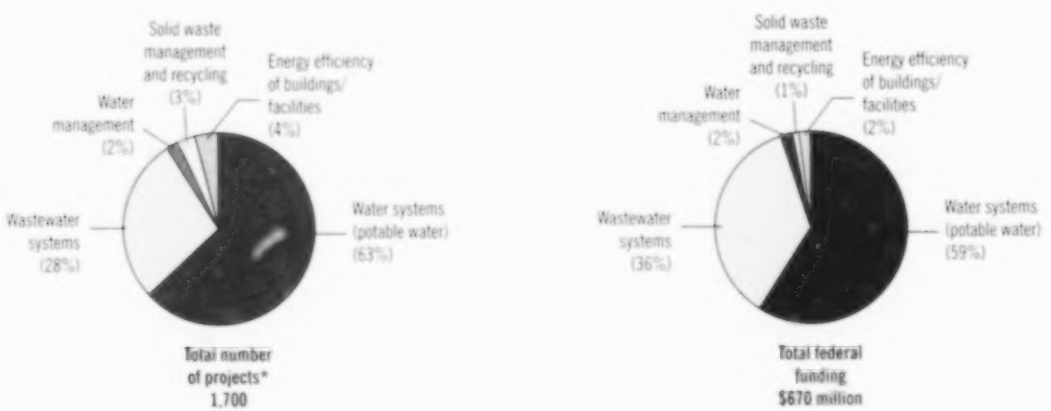
3.25 Program is well underway. Infrastructure Canada has informed us that as at 31 March 2003, approximately $1.3 billion of total federal Program funding has been committed for 2,770 approved projects. From that total, approximately $670 million went to 1,700 green municipal infrastructure projects (Exhibit 3.5).

3.26 According to the information provided, most of the $930 million green investments target had been committed, based on projects approved or completed as at 31 March 2003. As well, Infrastructure Canada informed us that the remainder of the uncommitted funding will be, for the most part, allocated toward funding applications already received.

3.27 Results are defined. The Program's expected environmental benefits or outcomes are improved water quality, improved air quality, improved water and wastewater management, improved solid waste management, and more efficient energy use. The Program has established several results measures for each of these benefits. Each project funded under the green component must identify and quantify the benefits to be achieved, according to one or more of these measures.

3.28 Tangible benefits. As an example, under the wastewater project category Infrastructure Canada indicated that an estimated 470 different projects had been approved or completed as at 31 March 2003. Of these, roughly 220 projects are expected to result in better treatment of wastewater for approximately 285,000 Canadian households (Exhibit 3.6). Another 210 projects will serve to increase the number of households connected to municipal wastewater systems (by almost 50,000). Accordingly, tangible environmental benefits are expected to be achieved before the Program ends.

Exhibit 3.5 **Green projects approved or completed as at 31 March 2003**


Solid waste management and recycling (3%)
Energy efficiency of buildings/ facilities (4%)
Water management (2%)
Wastewater systems (28%)
Water systems (potable water) (63%)
Total number of projects* 1,700
Solid waste management and recycling (1%)
Energy efficiency of buildings/ facilities (2%)
Water management (2%)
Wastewater systems (36%)
Water systems (potable water) (59%)
Total federal funding $670 million

* In cases where a project covers more than one category, the project is coded under the predominant benefit.

Source: Infrastructure Canada

Exhibit 3.6 **Examples of expected environmental benefits**

Environmental benefit measures (expected change)	Estimated number of projects[1]	Estimated benefits expected[2]
Households whose wastewater will be treated to a higher quality	220	285,000 households
Households to be connected to municipal wastewater collection and treatment systems	210	48,000 households
Decrease in municipal solid waste produced	30	30,000 tonnes per annum
Increase in solid waste diverted through recycling and composting	35	19,000 tonnes per annum

1 Estimated number of green projects approved or completed as at 31 March 2003 with the corresponding expected benefits (projects may have multiple benefits).

2 Estimated benefits expected from green projects approved or completed as at 31 March 2003.

Source: Infrastructure Canada

Environmental benefits are overstated

3.29 **What is a green benefit?** According to the Program, green projects result in an improvement to the quality of the environment. As part of our audit we examined the nature of the green project categories funded under the Program and their corresponding environmental benefits. Upon this review, we were satisfied that the wastewater, water management, solid waste, and energy efficiency projects would provide environmental benefits.

3.30 **Do potable water projects provide environmental benefits?** Our chief concern arose from the classification of potable water projects (which are part of the water systems category) as green. To be clear, we do not dispute the need and importance of potable water. Potable water projects produce essential human health and quality of life benefits. However we were not provided with sufficient evidence to indicate that in most instances they provide significant environmental benefits.

3.31 We reviewed various authoritative sources and consulted with professionals. Overwhelming evidence confirms that the primary goal of potable water projects is to promote public health and well-being and not to improve the quality of ecosystems or to otherwise solve environmental problems. We observed a lack of evidence to support the claim that the treatment, storage, or delivery of potable water usually provides notable environmental benefits. One environmental benefit that is associated with potable water projects deals with water conservation. For example, some potable water projects can result in a decrease in water lost either through leakage or through inefficient treatment operations.

3.32 There are a variety of potable water projects funded under the Program, such as enhancements to treatment processes or technologies,

maintenance of water storage or delivery systems, increases in water treatment and delivery capacity, treatment plant retrofits, changes in water supply sources, and new treatment plants and facilities. These water projects are more commonly associated with water demand and consumption. According to the information provided, only a small portion of potable water projects funded address water conservation issues.

3.33 Unclear environmental benefits. More importantly, Infrastructure Canada has not been able to demonstrate how potable water projects as a whole significantly contribute to improving the quality of the environment. The results measures utilized for these projects gauge, mainly, increased treatment capacity, access to, or quality of potable water, and do not reflect any noteworthy environmental advantage. As well, there is seldom any explicit description or documentation readily available to indicate how individual projects improve the quality of the environment.

3.34 We also examined the program's design and the rationale initially used to define green project categories and benefits. We expected to find a documented process and analysis supporting the inclusion of the five green project categories and their associated benefits. We were not provided with sufficient evidence that the government properly considered and defined what constitutes an environmental benefit when designing the Program.

3.35 The water systems category accounts for the largest portion of the Program's green funding. Infrastructure Canada estimates most of the green funding committed as at 31 March 2003 (roughly $400 million) is for these types of projects. As a result, accounting for potable water projects under this category toward the green municipal infrastructure component overstates the portion of funding allocated to improving the environment. It also misrepresents the environmental benefits being achieved.

3.36 Target may not be reached. While the Infrastructure Canada Program will produce important benefits, the design of the Program falls short of ensuring that all green projects meet the Program's first priority—improving the quality of the environment. Accordingly, it is not clear whether the minimum target of 47 percent of funding directed to improving the environment will be met, if projects in the water systems project category that do not have clearly demonstrated environmental benefits were excluded from the Program's green municipal infrastructure component.

Management framework not fully implemented

3.37 Sound management framework. In 2002, the Office of the Auditor General audited the Infrastructure Canada Program as part of its examination of new collaborative governance arrangements. The Office found that the Program's governance and accountability framework had improved from that of the earlier Canada Infrastructure Works Program, that it had established a clear accountability structure, and that the Program had incorporated most of the recommendations of previous audits of the Canada Infrastructure Works Program. These findings were based on an examination of the overall design

and framework of the Program, and not on an audit of program operations or project funding.

3.38 The design of the Infrastructure Canada Program management and accountability framework is important because it determines the government's ability to manage and account for the Program's environmental results and commitment. We examined selected elements of the Program's management framework—defined roles and responsibilities, defined terms and conditions of funding agreements, program monitoring and reporting requirements, provisions for evaluations and periodic audits, and reporting of program performance. In the three years since the government launched the Infrastructure Canada Program, the Department has made significant progress establishing the major components of its overall management framework.

3.39 **Further progress required.** We found that not all the management framework's requirements and features were fully implemented. Infrastructure Canada has commented that progress in certain areas has been delayed due to the restructuring that resulted from the creation of the Department. Nonetheless, further progress is required:

- The contribution agreements require that the program management committees in each jurisdiction submit annual audit plans as well as annual audit reports. Although the Program began in earnest in 2001, at the time this Report was being prepared, only six provinces/territories had submitted audit plans and three provinces had submitted audit reports.
- Infrastructure Canada is responsible for monitoring performance both on a provincial/territorial basis as well as on the overall Program. To date, efforts in these areas have been limited.
- The Minister responsible for Infrastructure reports to Parliament on the Infrastructure Canada Program's overall objectives and results. Our review of key accountability documents, such as the departmental performance reports and the reports on plans and priorities, showed that the Program's expected or actual environmental benefits have yet to be reported to Parliament.

Case study conclusion

3.40 Infrastructure Canada is investing in infrastructure that will benefit the environment. A number of projects have begun and are expected to generate environmental benefits. That said, we found that expected environmental results are overstated. We observed that a large portion of the green municipal infrastructure projects (those dealing with potable water) do not have clearly defined environmental benefits. The key challenges for the Department will be to ensure that environmental investments and benefits are fairly represented, and that when similar programs are developed in the future, proper considerations and definitions of environmental benefits are incorporated into their design.

3.41 **Important implications for the future.** Despite our concerns with aspects of the design of the Program, we recognize the Infrastructure Canada Program is well underway and that it may not be feasible at this stage to significantly change the design and delivery of the Program. However we do feel that the Department can ensure that its reporting of environmental benefits is fair and accurate.

3.42 **Recommendation.** When reporting on the environmental performance of the Infrastructure Canada Program, Infrastructure Canada should ensure that environmental benefits are not overstated or otherwise misrepresented. In other words, only projects with demonstrated environmental benefits should be reported as contributing to the federal government's commitment of improving the quality of the environment through infrastructure funding.

Department's response. Infrastructure Canada accepts this recommendation. Project priorities for Infrastructure Canada and its partners include projects that improve the quality of the physical environment as well as providing essential human health and quality of life benefits, such as potable water. The use of the term "green infrastructure" was intended to cover this broad definition. Infrastructure Canada will work with its partners to encourage reporting on project benefits that clearly distinguishes between quality of the physical environment benefits versus quality of life or other benefits.

3.43 A bigger issue is how the federal government will define green projects and account for environmental benefits in future programs of this type. We foresee similar challenges in the future regarding how the government defines projects that contribute to Canada's sustainability and accounts for sustainability benefits.

3.44 **Recommendation.** In future programs of this type, Infrastructure Canada should document how it defines green projects and related environmental benefits and ensure that these are incorporated into the design and implementation of the program.

Department's response. Infrastructure Canada accepts this recommendation. Infrastructure Canada will ensure that it clearly documents how it defines green projects in future programs. This documentation will be included in policy and program approvals. Infrastructure Canada will also work with its delivery partners on future reporting of benefits to distinguish between quality of the physical environment benefits, quality of life benefits, and other related benefits.

Eco-efficiency

Industry Canada: Linking the environment and the economy

3.45 The economic and environmental performance of industry plays an important role in the sustainability of Canada. How companies produce goods and services—and how consumers use them—influences a wide variety of factors from natural resources through to pollution levels. Are Canadian companies aware of and adopting leading-edge environmental practices? Are companies producing less pollution than they used to? Are they using natural

resources more wisely? Do consumers understand environmental labelling? Are consumers making more sustainable choices?

3.46 Industry Canada's commitments. In its 2001 sustainable development strategy, Industry Canada set an objective aimed at enhancing the capacity of Canadians, industries, and firms to develop and use eco-efficient practices, tools, technologies, and products that contribute to increased productivity and enhanced environmental performance. They also committed to facilitate the development and adoption of environmental and enabling technologies that produce long-term economic and environmental benefits. These objectives are the focus of this case study (Exhibit 3.7).

Eco-efficient—An improvement to the design and delivery of products and services that uses fewer natural resources and produces less pollution.

Exhibit 3.7 **How well is Industry Canada managing its objective?**

What we expected	What we found
Clear results-oriented objectives	The objectives are relevant and support the mandate of Industry Canada. Longer-term outcomes (increased productivity, long-term economic benefits, and environmental benefits) are identified in objectives.
Clear performance expectations and indicators	Targets in the strategy focus on completing action items. Performance indicators largely relate to number of activities undertaken and products produced. Targets and performance indicators need to better communicate the specific types of economic and environmental benefits being pursued by the Department. Action items provide reasonable description of what is being undertaken.
Results measurement	Status of action items and deliverables is being tracked. Evaluation of the 2001 strategy was recently completed. Topics covered included relevancy of the strategy, lessons learned, and achievements to date. Evaluation is planned for 2006 that would examine success in achieving the strategy's objectives. Some examples of results of action items being measured, however results measurement is not systematic across all action items.
Effective performance reporting	Industry Canada posts the status of its 2001 action items on its Web site (www.ic.gc.ca). Status of action items and description of selected accomplishments reported twice annually to the Deputy Minister as well as to committees at the Assistant Deputy Minister and Director General levels. Summary of progress is available in the Department's annual performance report.

3.47 **Producing more with less.** By identifying ways to make the most of resources and reducing wastes and pollution, eco-efficiency can be a tool for improving productivity and environmental performance as well as a driver of innovation. Eco-efficient practices can benefit businesses by

- improving productivity,
- reducing per-unit production costs,
- improving product or service quality,
- improving product durability,
- enhancing their image, and
- reducing environmental liabilities.

3.48 Eco-efficiency can also produce environmental benefits, such as

- reduced use of energy and materials,
- reduced solid and hazardous wastes,
- reduced water use and wastewater discharge,
- reduced greenhouse gas emissions, and
- increased recycling of materials.

3.49 Environmental technologies are aimed at preventing and controlling pollution, cleaning up and restoring the environment, increasing resource efficiency, analyzing environmental impacts, and monitoring pollution. Environmental technologies can result in many of the same benefits as eco-efficiency. In addition, sales and exports of environmental technologies can lead to revenues for Canadian companies and jobs for individual Canadians.

3.50 Both eco-efficiency and environmental technologies reflect federal government priorities and are related to the concepts of corporate sustainability and sustainable consumption and production.

Sustainable development strategy being implemented

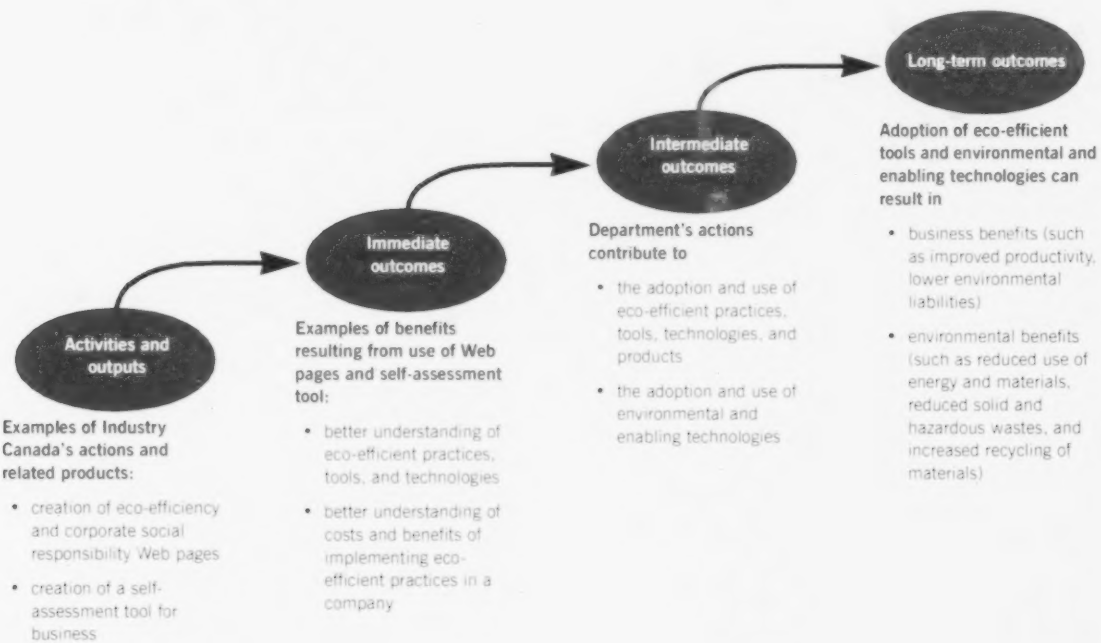
3.51 In its strategy, Industry Canada committed to completing by 2003, 18 action items that support eco-efficiency and 19 action items that support environmental technologies. Since the strategy was produced, the Department has added two eco-efficiency action items. As of the spring of 2003, the Department reported making progress on all its action items, completing 12 of 20 eco-efficiency action items and 9 of 19 environmental technology action items. Industry Canada reports that the majority of the action items not yet completed are at least 70 percent complete. The Department has put in place a good system to track the status of its action items and reports on progress to senior management on a regular basis.

3.52 Industry Canada's action items range from small projects to multi-million dollar programs. Many of the action items are foundation building and focus on providing information products to industries and financial contributions and non-financial support (such as advice) to projects. The action items include activities that were ongoing before the 2001 strategy was put in place while others are new initiatives. The activities typically involve

working with other organizations (such as Natural Resources Canada and Environment Canada).

3.53 **Examples of eco-efficiency actions and achievements.** Since tabling its strategy in February 2001, the Department has created several information products, including Web pages that are related to eco-efficiency and corporate social responsibility. The Department also created an eco-efficiency self-assessment tool for business. These types of products are aimed at increasing understanding of eco-efficiency in the short-term, and in the longer-term, adoption within companies (Exhibit 3.8). Industry Canada has co-delivered two workshops on building sustainable enterprises, covering eco-efficiency tools for business, such as design for the environment, supply chain management, eco-indicators, environmental reporting, life-cycle management, and environmental management systems. The Department has also contributed to a study covering a number of issues including environmental labelling. In the fall of 2002, the Department added a new action item to its strategy: contributing to the development of a national recycling program for products such as computers and televisions.

Exhibit 3.8 **Eco-efficiency and environmental technologies results chain: From activities to outcomes**


Activities and outputs
Examples of Industry Canada's actions and related products:
• creation of eco-efficiency and corporate social responsibility Web pages
• creation of a self-assessment tool for business
Immediate outcomes
Examples of benefits resulting from use of Web pages and self-assessment tool:
• better understanding of eco-efficient practices, tools, and technologies
• better understanding of costs and benefits of implementing eco-efficient practices in a company
Intermediate outcomes
Department's actions contribute to
• the adoption and use of eco-efficient practices, tools, technologies, and products
• the adoption and use of environmental and enabling technologies
Long-term outcomes
Adoption of eco-efficient tools and environmental and enabling technologies can result in
• business benefits (such as improved productivity, lower environmental liabilities)
• environmental benefits (such as reduced use of energy and materials, reduced solid and hazardous wastes, and increased recycling of materials)

Source: Adapted from Industry Canada, Sustainable Development Strategy

3.54 Examples of environmental technology actions and achievements. The Department's Technology Partnerships Canada program invests in Canadian companies developing, among other things, environmental technologies and enabling technologies. Examples of enabling technologies include advanced manufacturing techniques and materials that enable companies to produce higher quality and more durable products. The Department has also been involved in the development of industry-led technology strategies (called technology road maps) that identify new technologies, skills, and competencies required to meet future market demands. By the end of 2004, the road maps are expected to be developed in areas such as sustainable fuels and chemicals from biomass, fuel cells, and clean coal. In addition, the Department has been implementing the Sustainable Cities Initiative. Covering cities in developing and emerging economies, this initiative is aimed at improving access to foreign markets for Canadian companies that offer technologies and services in areas such as waste management, energy, and transportation.

Biomass — An organic, non-fossilized material that can be used as fuel. Examples include wood chips and corn.

3.55 Improved integration of sustainable development. Sustainable development is now included as part of the Department's priorities; along with issues such as trade, investment, and innovation, sustainable development is identified as a core priority. Increased development and application of eco-efficient practices and technologies is one of the Department's commitments under its goal of improving innovation in Canada.

Results measurement and reporting need improvement

3.56 Measuring outcomes. Industry Canada's actions and achievements form the foundation for achieving outcomes. Opportunities exist to improve results information related to these outcomes on two levels. The first level deals with measuring short-term outcomes, particularly those related to the Department's information products. For example, how many companies are using the Department's products? What sectors of the economy do they represent? Are clients satisfied? Are the Department's products meeting their needs? Do companies better understand eco-efficient practices and opportunities related to environmental technologies and are consumers better informed as a result of the Department's activities? In short, what impact are Industry Canada's actions having? While the Department can provide answers to some of these questions, additional progress on results information is needed. In addition to indicating what impact the Department's products are having, this type of information is also useful for determining how existing products could be improved and whether new actions should be pursued.

3.57 The second and most important level relates to intermediate and longer-term outcomes and whether industry and consumer practices are becoming more sustainable. For example, to what extent are Canadian businesses adopting eco-efficient practices and environmental technologies?

How is the adoption of these practices and technologies changing over time and by industry sector? To what extent are Canadian companies

- achieving economic benefits, such as improved productivity, by using eco-efficient practices,
- using fewer resources and materials and producing less pollution,
- increasing material recyclability, and
- maximizing the use of renewable resources?

Are consumer behaviours and practices becoming more sustainable?

3.58 **Incomplete answers.** Industry Canada has contributed to surveys and case studies that have examined the use of eco-efficient practices and environmental technologies. Improvements have been made in terms of collecting information on intermediate and longer-term outcomes, but information gaps exist. There is also a need for more comprehensive reporting on those types of questions.

3.59 An important challenge for Industry Canada is to go beyond the completion of action items and measure the longer-term outcomes to which these actions contribute. Assessing the Department's contribution is especially challenging given that several factors influence the achievement of intermediate and longer-term outcomes. Industry Canada has concluded that it needs to assess its contributions toward potential long-term benefits and progress on mid- to long-term results (for example, five to ten years and beyond). To address these issues the Department is planning an evaluation for 2006 that would assess the long-term impacts of its sustainable development strategies.

3.60 **Reporting needs to go beyond the status of action items.** Current progress reporting indicates the status of the Department's action items and provides examples of selected achievements involving the Department. Reporting that goes beyond the status of these action items to include information on short-term outcomes (such as who is using the Department's products and services and how well the products are meeting the needs of these clients) and contributions to longer-term results would provide senior management and the public with a better understanding of the results the Department is achieving. The strategy identifies performance measures such as the number of projects funded, reports produced, and workshops and tools developed. However current reporting does not provide summary-level information on these performance measures.

3.61 **Pulling it all together.** Industry Canada has recently developed a draft results chain for its 2001 sustainable development strategy and a draft template for describing the action items the Department is considering for its 2003 sustainable development strategy. The template is aimed at developing more results-oriented objectives and targets, while serving as a guide for measuring and reporting results. For example, for a topic such as corporate sustainability reporting, the template would outline desired results (increase in the quantity of corporate sustainability reporting from Canadian

industry), outputs (reporting toolkits, Web sites, and workshops), performance indicators, and timelines. We expect the department to use these tools when developing its next sustainable development strategy.

Case study conclusion

3.62 Industry Canada is making progress toward its stated objectives. It is meeting its commitments in its sustainable development strategy and has put in place a good system for tracking the status of its commitments. We are encouraged by the Department's actions and how it is integrating eco-efficiency and environmental technologies into its priorities and planning documents. The future challenge for the Department will be to measure and report on the impact of its actions on Canadians, industries, and firms. This would allow the Department to provide a more complete picture of the value for money it is providing to Canadians.

3.63 **Recommendation.** For its 2003–2004 departmental performance report and future internal progress reports, Industry Canada should expand its reporting to include information on results such as the use, satisfaction, and impact of its products and services.

Department's response. Industry Canada accepts this recommendation. Industry Canada continues to be committed to modern comptrollership initiatives including expanding and enhancing the reporting of results in its Departmental Performance Report (DPR). With respect to sustainable development (SD) specifically, the 2002–2003 report, and future reports, will follow the Treasury Board Secretariat's guidelines for reporting on SD. The DPR will also provide a link to the Department's SD Web site to facilitate access to more detailed results information on the progress of the SD action items.

Industry Canada is redesigning its template for developing action items for its 2003 SD strategy to facilitate expanded and enhanced reporting of SD results. An initial step is to modify the Department's on-line SD reporting system to enable better reporting of the results achieved for each action item. This is targeted for completion in 2004–2005 and will support improved SD performance reporting in future DPRs, in internal progress reports to senior management, and on the Department's SD Web site.

3.64 The Department is planning an evaluation for 2006 that would examine the Department's success in achieving its objectives related to eco-efficiency and environmental technologies. At the same time, it is important that the Department provide an overall picture of progress regarding the adoption of eco-efficient tools and environmental technologies, longer-term economic and environmental benefits, trend information, and information gaps.

3.65 **Recommendation.** As part of its evaluation in 2006, Industry Canada should produce a consolidated report on the adoption of, and the economic and environmental benefits associated with, eco-efficiency and environmental technologies in Canada. This report should include a discussion on information gaps that exist and how they could be addressed.

Department's response. Industry Canada accepts this recommendation. Industry Canada intends to conduct an evaluation in 2006–2007 to measure the cumulative impacts of its three strategies—SDS I, SDS II and SDS III. It will seek to assess progress towards near-term and longer-term outcomes related to the adoption of, and benefits associated with, eco-efficiency and environmental technologies.

As part of a consolidated progress report on eco-efficiency and environmental technologies to be included in the evaluation, efforts will also be made to include a discussion on information gaps that exist and how they could be addressed. To assist in this process, Industry Canada will consult with key departments and agencies involved in the collection and publication of data on environmental technologies and eco-efficiency performance indicators.

Green employment

Human Resources Development Canada: The nature of employment in the future

3.66 What will the Kyoto Protocol to the United Nations Framework Convention on Climate Change mean for Canada's labour market? What is green employment and how can its growth be promoted over the longer term? What are the sustainable development-related knowledge and skill needs in our economy? These are important questions that integrate social, economic, and environmental issues; answers to which could help prepare Canada for the shift toward a more sustainable society.

3.67 Human Resources Development Canada's commitment. In its 2001 sustainable development strategy, Human Resources Development Canada (HRDC) set an objective with commitments that address the questions presented above. That objective is intended to help lay a foundation for the continued integration of sustainable development into HRDC's activities. HRDC's progress on this objective is the focus of this case study (Exhibit 3.9).

Exhibit 3.9 **How well is Human Resources Development Canada managing its objective?**

What we expected	What we found
Clear results-oriented objective	Objective indicates what HRDC is trying to achieve in the short-term. Expected longer-term outcomes will not be known until this foundation-building work is completed.
Clear performance expectations and indicators	Targets are clear with deadlines. They are an improvement over the Department's 1997 sustainable development strategy. Output-based performance indicators have been set. As this foundation-building work is completed we expect outcome indicators will be developed.
Results measurement	No results to be measured. Performance measurement framework for policy commitments not fully implemented.
Effective performance reporting	No results to report. Recent public reporting reasonably transparent on delays.

Disappointing progress

3.68 HRDC has made disappointing progress in achieving results on the commitments it has made (Exhibit 3.10).

Exhibit 3.10 **Progress on Human Resource Development Canada's sustainable development objective**

Objective: To begin building a better understanding of sustainable development-related issues of particular interest to HRDC and their implications for social policy and programs

Targets	Status
Explore the labour market and social adjustment issues related to the Kyoto Protocol and other possible interventions over the longer term to address climate change/global warming. Produce research study by 31 March 2002.	Preliminary qualitative work undertaken. Department considers target as being met.
Investigate the concept of green employment, its broad implications for social policy, and ways in which its growth could be promoted or enhanced over the longer term. Produce research study by 31 October 2002.	Terms of reference established. Deadline extended until November 2003.
From a program perspective, review how HRDC's existing programs might foster the development and growth of green employment in Canada. Complete review by 31 December 2002.	Deferred pending completion of study on green employment.
Assess overall sustainable development-related knowledge/skill needs in the economy over the medium term and how these might be better incorporated into HRDC's sectoral human resources programs and strategies. Complete assessment by 30 November 2002.	Deferred pending completion of study on green employment. Deadline extended until November 2003.
Explore ways in which HRDC could better promote and foster the shift to sustainable development in Canada over the longer term. Initiate by 1 May 2003.	Start-up date outside the time period covered by our audit.

Source: Human Resources Development Canada

3.69 Preliminary report on the Kyoto Protocol prepared. HRDC's commitment to research the labour market and social adjustment issues related to the Kyoto Protocol is timely, given Canada's recent ratification of the Protocol. At the time of this audit, HRDC had prepared only a qualitative report on this topic which has not been made publicly available. This report identified sectors in the economy that could be affected by implementing the Kyoto Protocol. The report also examined possible pressures on skill requirements and training needs. It is noted in the report that a more exhaustive study on the impact of the Kyoto Protocol was to be completed. This has not been done. According to HRDC, it is now going to use the cost impact data contained in the November 2002 Climate Change Plan for Canada in place of this more exhaustive study, and considers its target as

being met. The Department has not indicated how it is going to act on the information contained in either the preliminary study it undertook or the Climate Change Plan for Canada.

3.70 Commitments related to the concept of green employment and sustainable development-related knowledge and skill needs in the economy have not yet been fulfilled. HRDC has extended its deadlines for this work to November 2003. Department officials explained that until HRDC further explores and defines the concept of green employment, additional progress will be limited.

3.71 **Rate of progress is unsatisfactory.** We are not satisfied with the Department's rate of progress on its objective, especially given the foundation-building nature of the commitments and the fact that this is the Department's second strategy. Delays mean that Canadians are not getting answers to important questions regarding sustainable development and employment issues. HRDC is failing to identify opportunities for changing or adjusting its existing policies and programs to further sustainable development.

Basic management practices missing

3.72 HRDC committed to establishing a performance measurement framework for its strategy to understand and improve its performance against its sustainable development objectives. The framework was to have outlined roles and responsibilities for implementing commitments, performance expectations, and procedures for reporting and review. Department officials inform us that while elements have been implemented, the framework is not complete.

3.73 The lack of progress on the Department's objective and its associated targets means that there is little to report in terms of short- or longer-term outcomes. The Department's most recent performance report and report on plans and priorities are reasonably transparent with respect to informing Parliament and the public of its decision to extend its deadlines; however, these documents do not make clear the status of the research study on the labour market implications of the Kyoto Protocol. Limited internal progress reporting to senior management is occurring. The Department needs to improve this reporting so that managers can follow the rate of progress on sustainable development objectives.

3.74 In 2001, we reported that HRDC was one of several departments and agencies that had more than one shortcoming related to its ability to measure and report on performance, review current practices, and guide improvement. We are concerned with the Department's lack of progress on how it manages its objective.

3.75 **Connecting the Department's activities and its sustainable development strategy.** HRDC indicated that outside its sustainable development strategy, the Department is also contributing to Canada's sustainability. We take at face value (but did not audit) HRDC's claim that it is engaged in programs and initiatives that contribute to making Canada

more sustainable. However the objectives of these programs and initiatives are not included in the Department's sustainable development strategy. This raises concerns: how complete is the strategy and how well connected is the strategy to the Department's activities?

Case study conclusion

3.76 HRDC has made important and timely commitments but little progress in fulfilling them. Nor has it put in place an effective performance measurement framework to track its own progress. This indicates to us that the Department attaches low priority to this objective. HRDC needs to fulfill its commitments, measure results, and report on progress.

3.77 **Recommendation.** By the end of the 2003–2004 fiscal year, HRDC should develop and implement its performance measurement framework to support its sustainable development objectives, especially those related to social policies and programs. This framework should include a results chain that links its short-term activities and outputs with long-term outcomes. Also in its next sustainable development strategy, HRDC should

- indicate how it plans to use the information it is collecting on topics such as the labour market and social adjustments issues related to the Kyoto Protocol and green employment,
- better integrate its strategy with the other sustainable development-related activities it is undertaking.

Department's response. HRDC has been setting targets and measuring program effectiveness and impacts in the context of environmental sustainability, quality of life, and greening the Department's activities for several years. HRDC agrees that further actions to establish a more formal performance measurement framework will continue with oversight provided by an internal working group specific to the sustainable development strategy. The group will identify areas to improve tracking, measuring, and reporting the Department's progress on its sustainable development commitments especially in areas related to social policy and programs.

Regarding the use of information on subjects like the Kyoto Protocol and green employment, HRDC as a matter of course uses its research findings to interpret and react to social and labour market adjustments through its policies and programs. For the Kyoto Protocol, the Climate Change Plan for Canada was established as the Government of Canada's response.

HRDC agrees with the Commissioner's recommendation to clarify the linkages between key departmental activities and sustainable development, and is undertaking this as part of the preparation for, and ongoing work associated with the third sustainable development strategy.

Making communities more sustainable

Environment Canada: Working to maximize the impact of federal programs at the community level

3.78 Several federal government departments and agencies simultaneously deliver programs and services in local communities. Various stakeholders have identified a lack of co-ordination among federal programs as a barrier to making communities more sustainable. How is this barrier being addressed? Are improvements being made in the delivery of federal programs? Are Canadian citizens getting more co-ordinated, efficient, and effective services?

3.79 **Environment Canada's commitment.** In its 2001 sustainable development strategy, Environment Canada set an objective to better integrate, by the end of 2003, the delivery of individual federal programs at the community level (Exhibit 3.11). The Department intended to maximize the programs' environmental, social, and economic impacts. Several targets support this objective including the development and implementation of a federal framework for sustainable communities. That objective is the focus of this case study; it is one of several objectives in Environment Canada's strategy related to the broader goal of helping Canadian communities become more sustainable.

Exhibit 3.11 **How well is Environment Canada managing its objective?**

What we expected	What we found
Clear results-oriented objective	Consultations done by the Department indicate that better co-ordination and integration is relevant and meaningful. Not clear what the scope of the objective is nor what results the Department wants to accomplish through better integration.
Clear performance expectations and indicators	Targets vary in how clearly they are stated. The extent of progress Environment Canada wants to achieve is not clear.
Results measurement	No results measurement at level of the objective. The Habitat Stewardship Program for Species at Risk has developed a results-based management accountability framework that identifies expected results and performance indicators.
Effective performance reporting	Reporting is focussed on anecdotal progress on targets. No reporting at the level of the objective.

Mixed results

3.80 Efforts aimed at better co-ordination underway. Several targets are underway that are aimed at co-ordinating federal programming at the community level (Exhibit 3.12).

Exhibit 3.12 **Progress on Environment Canada's sustainable development objective**

Objective: The delivery of individual federal programs is better integrated at the community level in order to maximize their impact in meeting environmental, social and economic goals (to be achieved by December 2003)

Targets	Status
Develop and implement, with partners, a federal framework on sustainable communities.	Consultations have been undertaken and a discussion paper on sustainable communities was prepared for the 2002 World Summit on Sustainable Development. Department does not expect target to be met until after March 2004.
Explore the feasibility, with partners, of applying a sustainable communities approach through selected pilot projects (including those with Aboriginal communities), using federal councils as a catalyst where appropriate.	Federal councils in provinces such as Nova Scotia, Quebec, Ontario, and Manitoba have been involved in activities supporting sustainable development and better integration of federal programming. Regional activities related to sustainable development and integration are also taking place outside of the councils.
Develop and implement Government On-Line projects to support the delivery of sustainable community initiatives and related federal programming.	Government of Canada Web site (Canada Site) provides the general public access to federal government information on the environment and sustainable development (www.environmentandresources.ca). Environment Canada's Urban Pilots initiative is currently in the early stages of determining how to build in a community focus. One element is a Government On-Line project dealing with program and service delivery mechanisms.
Implement the Habitat Stewardship Program for Species at Risk nationally through partnerships, and co-ordinate and integrate with other similar programs by 2002.	The $45 million Habitat Stewardship Program for Species at Risk, delivered co-operatively by Environment Canada, Parks Canada, and Fisheries and Oceans Canada, was launched in 2000. Co-ordination and integration are being achieved through this Program. Environment Canada also involved in the creation of Canada's Stewardship Agenda, a federal-provincial/territorial initiative aimed at improving co-ordination and co-operation among habitat stewardship programs across Canada.

Source: Environment Canada

3.81 Implementation of federal framework on sustainable communities delayed. The goal of making communities more sustainable involves many different federal departments and agencies. One of the targets Environment Canada is pursuing with other federal government departments is the development and implementation of a federal framework on sustainable communities. Important foundation-building work, the purpose of this framework is to describe the federal government's vision, guiding principles, and strategic approach regarding sustainable communities. Another purpose of the framework is to outline tools that can be used to make communities more sustainable, and to establish a process for evaluation and reporting.

3.82 Progress on the federal framework for sustainable communities has stalled. Department officials informed us that one reason for this is that they have shifted resources to other initiatives related to sustainable communities. The deadline for implementing the framework was originally the end of 2003 but was extended to the end of March 2004. The Department now advises that it will not meet that deadline and has yet to set a new date for implementing the framework. Without this framework, it will not be clear where the federal government is heading regarding sustainable communities.

Performance expectations need to be clarified

3.83 It is not clear what results and outcomes Environment Canada is trying to achieve through better integration. The scope of the objective and the extent of the progress the Department is trying to achieve are also not clear. For example, while the objective is to better integrate programs, the Department does not have a list of federal government programs that could be targeted for integration. There is no indication how many pilot projects related to applying a sustainable communities approach the Department hopes to explore. There is also no indication of the type and number of Government On-Line projects (an initiative aimed at providing access to government information and services through the Internet) it hopes to develop and implement. Clear performance expectations are important for measuring progress and determining if the activities underway and related progress are reasonable.

Results measurement not taking place

3.84 Environment Canada's sustainable development strategy identifies two performance indicators related to the question of better integration of federal programs: level of satisfaction of users with various community-based products and services; and scope and number of community partnerships for sustainable development that actively engage Environment Canada. These are a limited number of indicators. However measuring these indicators would provide information on the short-term results related to the Department's objective; the Department informed us that it is not currently tracking these measures. Environment Canada needs indicators that better reflect the longer-term outcomes being pursued.

Reporting needs to focus more on results

3.85 Environment Canada's current reporting on its sustainable development strategy provides anecdotal information on actions taking place on the integration of federal programs. There is little reporting on the extent to which targets are being met, the progress made on the objective as a whole, and the outcomes achieved. The Department told us that it may attempt to report at the level of objectives in its next departmental performance report.

Accountability a question mark

3.86 The Department is pursuing targets that involve several branches in both its headquarters and regional offices. Effective management of the objective requires clear accountabilities so that actions get taken and the results of these actions get rolled-up across the Department. In the case of the specific commitments related to pilot projects involving federal councils, and the Government On-Line project we have examined, it was not clear who at Environment Canada was responsible for making sure progress was made, measured, and reported. In addition, no one was responsible for gathering the information on individual commitments to help determine the overall progress being achieved.

Case study conclusion

3.87 Actions on the Department's commitments have begun. Environment Canada needs to be clearer on the results and outcomes it is trying to achieve through better integration. The Department is not managing its objective in an effective manner. The key challenge for Environment Canada will be to adopt a results-based management approach for its objective by establishing better performance expectations and by better measuring and reporting on the results it is getting from its integration efforts.

3.88 **Recommendation.** In its next sustainable development strategy, Environment Canada should establish clear performance expectations and accountabilities for its objective to integrate federal programs at the community level. The Department should use a results chain to link the activities it is undertaking with the longer-term outcomes it is pursuing. Beginning with its 2003-2004 departmental performance report, it should also measure and report on progress it is making on the objective as a whole, and the outcomes it is achieving.

Department's response. Environment Canada accepts this recommendation. Environment Canada accepts that its next sustainable development strategy should establish clearer performance expectations and accountabilities, and that reporting on progress should be focussed on meaningful outcomes. These are areas for improvement that we will address as we update our sustainable development strategy for 2004–2006. An important aspect of this updating process will include an assessment of the commitments in the current strategy, including objectives related to sustainable communities.

Conclusion

3.89 We observed varying degrees of progress being made in support of the sustainable development objectives covered in this report's case studies. In terms of how the departments are managing the objectives, our findings reflect many of the same conclusions made in the past by the Commissioner of the Environment and Sustainable Development:

- objectives and related performance expectations need to be clearer, more concrete, and results-oriented;
- results—especially outcomes—need to be more systematically measured; and
- performance reporting needs to be improved.

3.90 The context surrounding each objective we examined differs and for this reason we did not try to make comparisons between each case study. However the case studies are quite revealing in terms of how departments are addressing environment and sustainable development issues and the progress they are making. This includes how they are setting objectives and performance expectations, the rate at which they are implementing commitments, and how they are measuring and reporting performance.

3.91 These case studies illustrate that sustainable development is not just about the environment, but involves important social and economic issues as well. The case studies also illustrate that sustainable development is not just the responsibility of Environment Canada but involves all federal departments including those with social and economic mandates.

3.92 Sustainable development objectives are typically long-term and can require many years to achieve. Determining progress requires monitoring and assessment over time. We intend to follow up on significant observations and recommendations made in this year's Report. We feel that this approach to monitoring and reporting progress will make departments more accountable for their commitments while providing a more in-depth picture of progress toward sustainable development.

About the Audit

Objective

The objective of this audit was to determine whether selected federal government departments and agencies are making progress toward specific sustainable development objectives.

Scope and approach

Four departments and five objectives were covered in this year's Report:

- Infrastructure Canada—improve the quality of the environment by funding infrastructure through the Infrastructure Canada Program;
- Industry Canada
  - enhance the capacity of Canadians, industries, and firms to develop and use eco-efficiency practices, tools and technologies, and products that contribute to increased productivity and environmental performance;
  - facilitate the development and diffusion of environmental and enabling technologies that produce long-term economic and environmental benefits;
- Human Resources Development Canada—begin building a better understanding of sustainable development-related issues of particular interest to HRDC and their implications for social policy and programs; and
- Environment Canada—better integrate the delivery of individual federal programs at the community level to maximize their impact in meeting environmental, social, and economic goals.

We analyzed the sustainable development strategies and relevant files and documents such as performance reports, performance management frameworks, results-based management and accountability frameworks, program evaluation reports, and internal audits. We also interviewed department and agency officials and selected external stakeholders.

Some quantitative information in this chapter is based on data drawn from various sources indicated in the text. We have satisfied ourselves as to its reasonableness given the use we have made of these data. However that information has not been audited, unless otherwise indicated in this chapter.

Audit criteria

As a means of assessing progress we expected that the departments covered by our monitoring would be

- setting sustainable development objectives that represent a clear statement of the results to be accomplished;
- setting clear performance expectations and indicators for their sustainable development objectives;
- meeting their performance expectations;
- measuring results (including the achievement of targets and short-term, intermediate, and long-term outcomes); and
- effectively reporting how well they are meeting their sustainable development objectives.

We carried out a more detailed examination of the Infrastructure Canada Program. In conducting this examination, we expected to find that

- the objectives and design of the Infrastructure Canada Program were consistent with the original objective in the Treasury Board Secretariat's sustainable development strategy; and
- the Infrastructure Canada Program was co-ordinated and managed to ensure the achievement of its objective of improving the quality of the environment.

For the Infrastructure Canada Program, we did not audit the Program from a grants and contributions perspective. For example, we did not look at aspects such as whether the Program complies with the *Financial Administration Act* and the Treasury Board policy on transfer payments, nor did we look at project monitoring.

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Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2003

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2003

Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 4

Environmental Petitions

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The 2003 Report of the Commissioner of the Environment and Sustainable Development comprises four chapters and The Commissioner's Perspective—2003. The main table of contents is found at the end of this publication.

This report is available on our Web site at www.oag-bvg.gc.ca.

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Chapter

4

Environmental Petitions

This chapter on petitions serves to fulfil the requirements set out pursuant to section 23 of the Auditor General Act. *It describes the issues being addressed in environmental petitions received during the past year and highlights how federal ministers are responding to petitioners' questions and concerns. It also describes the steps being taken by the Commissioner to maximize the effectiveness of the process, including auditing petition responses.*

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by the Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

If you have comments or questions about the environmental petitions process or want to submit a petition, please contact us at the following:

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Message from the Commissioner

Johanne Gélinas
Commissioner of the Environment
and Sustainable Development

When I took up the post of Commissioner of the Environment and Sustainable Development three years ago, I considered the environmental petitions process under the *Auditor General Act* one of the most valuable parts of my mandate. I was surprised that so many Canadians were unaware of a direct tool available to them to seek answers from the government about "an environmental matter in the context of sustainable development." I saw an opportunity to improve public awareness of the process and to promote its use as the effective accountability tool Parliament designed it to be.

I see the petitions process as a tool for individual Canadians to personally require accountability from their government. People from across the country often write and ask me to investigate or audit an environmental incident or issue that has come to their attention. Everyone has an important story to tell. Nevertheless, I do not have the resources to tackle every issue. That is why I encourage Canadians to pursue their concerns, large or small, on their own behalf by exercising their right to submit petitions. They can be confident that through the petitions process, they will receive authoritative and timely responses to their concerns directly from federal ministers and departments.

My first two Reports to Parliament, in 2001 and 2002, promoted the petitions process by providing information and demonstrating that the process was effective at getting answers for Canadians. I am pleased that the use of the process is increasing. And departments are giving petition responses their attention and efforts.

In their responses over the years, federal ministers have made commitments to act on the environmental concerns raised by petitioners. But who is taking the next step—following up to determine whether these promises have generated real action by departments?

As the guardian of the environmental petitions process on behalf of the Auditor General, I am convinced that it is vitally important to take this task on. We will know if this process really generates positive benefits for the environment only if we check to see whether departments have followed through on their commitments. In this chapter we report on our first audits of commitments made in petition responses.

Besides reporting whether departments lived up to commitments, these audits can raise broader questions for parliamentarians to consider.

Although trichloroethylene (TCE) was declared toxic and probably carcinogenic to humans a decade ago, Environment Canada has only recently finalized control measures for this substance. I highlighted this long delay in

my 2002 Report (Chapter 1, Toxic Substances Revisited, Exhibit 1.5). The Department began to develop regulations in 1997. In its February 2001 response to Petition No. 25, Environment Canada committed to completing the draft regulations and set a target of mid-2001. While it did succeed in introducing draft regulations, it was in December 2002, after a further 16-month delay. The final regulations came into force on 24 July 2003.

The Canadian Drinking Water Quality guideline for TCE was established in 1987. It was flagged for review in 1993. However, it was not until May 2000 that Health Canada recommended that the reassessment for TCE begin as soon as possible. This review did begin in earnest in the spring of 2002 and it is now complete (as promised by Health Canada in its petition response, Petition No. 25). The result is that Health Canada is recommending that the TCE guideline be made more stringent. The Department must now work with the provinces and territories to make any final changes to the guideline. I encourage Health Canada to work as quickly as possible to see that this is realized.

While I appreciate the complexity of putting in place new regulations and guidelines, I am troubled that actions to protect human health and the environment take so long.

The Canadian International Development Agency (CIDA), in response to Petition No. 41B, decided to enhance public access to environmental assessments it funds by, for example, ensuring that these assessments are made available on the Internet. The commitment was limited to environmental studies for hydro dam projects—only one of various types of infrastructure projects in which CIDA is involved. What is the rationale for applying this commitment to only one type of project? Does CIDA intend to enhance public access to environmental studies for other types of projects? CIDA was unable to respond to such questions to my satisfaction.

I remain committed to the environmental petitions process and to seeing it develop further as an important accountability tool for Canadians.

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Environmental Petitions

Main Points

4.1 Our audits of actions taken by departments on commitments made in four responses to petitions found inconsistent results. On the one hand, we found that some challenging commitments were fulfilled by departments. On the other hand, what might be seen as relatively simple policy and procedural changes were poorly implemented.

4.2 Specifically, in the four audits we found the following:

- Environment Canada met its commitment to develop a regulation for the toxic substance trichloroethylene, albeit later than its target date, and 10 years after the substance was declared toxic. Health Canada has met its commitment to review the Canadian Drinking Water Quality Guideline for trichloroethylene and is recommending a tightening of the guideline.
- Environment Canada has substantially met its commitment to assure itself that a pulp mill in Manitoba is in compliance with regulatory discharge limits and environmental effects monitoring requirements.
- Fisheries and Oceans Canada has not met its commitment: it has failed to take the first steps crucial to implementing a new policy to notify project proponents about public access requirements under the *Canadian Environmental Assessment Act*.
- The Canadian International Development Agency has not met its commitment: it has not fully implemented a new requirement designed to enhance public access to and public participation in environmental studies it funds for proposed hydro dam projects outside of Canada.

Fisheries and Oceans Canada and the Canadian International Development Agency have responded. Both departments have accepted our recommendations to implement their petition commitments. Their responses, which follow the recommendations in the chapter, indicate the actions they intend to take and when these will be complete.

4.3 We have seen a number of positive developments in environmental petitions in the past year:

- The number of petitions continues to grow (up from 28 last year to 38 this year).
- The variety and range of issues being addressed by Canadians using the petitions process has expanded to include topics such as endangered species, wind energy projects, contaminated harbours, strategic environmental assessment, nuclear liability, and military training areas.

- New types of petitioners are using the process: members of provincial legislatures and elementary and university students.
- Petitioners are using the process again to follow up on the responses they have received.
- Late responses by Fisheries and Oceans Canada and Environment Canada are no longer an issue.
- Parliamentary interest in the petitions process has increased.

4.4 This year, all but a few petition replies clearly responded to petitioners' concerns and requests.

4.5 Ministers and departments are taking advantage of the opportunities presented by the petitions process. They have used their petition responses as a platform to clarify federal policies and positions and to explain their role and involvement in an issue. In some cases, they have pledged to take action in response to petitions and have announced new policies or requirements. They have also initiated a research study and launched investigations.

Background and other observations

4.6 The environmental petitions process was established under the *Auditor General Act* in 1995. The Commissioner co-ordinates the petitions process on behalf of the Auditor General. Through the environmental petitions process, Parliament has provided Canadians with a tool to ask questions about and to receive authoritative answers to environmental concerns that involve the federal government.

4.7 The full text of petitions and responses can be found in the petitions catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf/english).

Introduction

What do the following environmental issues have in common?

- Sea lice on wild salmon on the West coast
- Coal tar contamination in Hamilton Harbour
- Mustard gas dumped off the East coast
- Wind energy in Prince Edward Island
- Disruption of fish habitat along the Trent-Severn Waterway
- Lake drainage for hydro generation
- Spraying of pesticides in a national park in Saskatchewan
- Implementation of strategic environmental assessments for new federal policies and programs

Answer: they are all the subject of petitions filed under the provisions of the *Auditor General Act*.

4.8 Under the *Auditor General Act*, any Canadian resident, whether an interested individual, organization, a business, a municipality, or other body, has the right to submit an environmental petition to the Auditor General of Canada. Petitions need only concern an environmental issue; they can be put into the broader context of sustainable development. The issue must be the responsibility of at least one of the 25 federal departments and agencies listed in the Act (Exhibit 4.1). The Commissioner of the Environment and Sustainable Development co-ordinates the petitions process on the Auditor General's behalf. The Commissioner forwards petitions to the appropriate departments and agencies. Petitioners are entitled to a substantive reply to their petitions within 120 days from the appropriate federal ministers. The basics of the petitions process are described in Exhibit 4.2.

Exhibit 4.1 Federal departments and agencies subject to the environmental petitions process

The petitions process applies to 25 federal departments and agencies:

Agriculture and Agri-Food Canada
Atlantic Canada Opportunities Agency
Canada Customs and Revenue Agency (formerly Revenue Canada)
Canada Economic Development Agency for Quebec Regions
Canadian Heritage, Department of
Canadian International Development Agency
Citizenship and Immigration Canada
Environment Canada
Finance Canada, Department of
Fisheries and Oceans Canada
Foreign Affairs and International Trade, Department of
Health Canada
Human Resources Development Canada
Indian and Northern Affairs Canada
Industry Canada
Justice Canada, Department of
National Defence
Natural Resources Canada
Parks Canada Agency
Public Works and Government Services Canada
Solicitor General Canada
Transport Canada
Treasury Board of Canada, Secretariat
Veterans Affairs Canada
Western Economic Diversification Canada

Exhibit 4.2 **The basics of the environmental petitions process**

In December 1995 the *Auditor General Act* was changed. The changes established the position of the Commissioner of the Environment and Sustainable Development and created the environmental petitions process. If you are concerned about an environmental matter involving the federal government, the petitions process may work for you.

Who can use the process?

Whether you are an individual, an organization, a municipality, or a corporation residing in Canada, the environmental petitions process is there for you to use.

What does a petition look like?

Your petition can be a simple letter that outlines your concerns and requests. Or you may wish to submit a more substantial document that provides detailed background information on the issue that you are raising in your petition.

Who signs a petition?

Multiple signatures are not necessary. You alone can sign the petition, or others can sign as well. The choice is yours.

Can a petition deal with any issue?

There are two major requirements:

- Your petition must address an environmental issue. Your concern can relate to the broader concept of sustainable development.
- At least one of the 25 federal departments and agencies that are involved in the petitions process must be responsible for addressing the issue or concern. Appendix A provides a list of these departments and agencies.

Where is a petition sent?

You send your petition directly to the Auditor General of Canada. The Commissioner is responsible for handling petitions on the Auditor General's behalf.

What happens after a petition is submitted?

The Commissioner does not respond directly to environmental petitions. Ministers and their departments do. Under the process, the Commissioner's staff review your petition. If they determine that it meets the requirements set out in the *Auditor General Act*, the Commissioner forwards your petition to the federal departments and agencies that are responsible for the issue being addressed in your petition. The appropriate federal ministers receive and respond to petitions on behalf of the departments and agencies. A minister receiving a petition is required to reply within 120 days.

What kinds of questions can be asked in a petition?

As a petitioner, you can approach environmental issues and concerns from different angles. For example, if you think a federal law is being broken or is not being enforced, you can ask federal departments to investigate. Here are some other possibilities:

- If you are not clear about a federal policy pertaining to an environmental issue, you can ask for clarification.
- You can ask government departments or agencies to review existing environmental laws, regulations, or policies; you can recommend improvements and get a response to your suggestions.
- If you want to know how a particular department is involved in an issue, you can ask for details.
- When a federal minister has made a commitment on an environmental issue, you can ask that minister what steps have been taken to fulfil the commitment.
- Perhaps you want to know what a particular department is doing to "green" its operations. If so, you can ask that department to provide you with an update.

Any questions?

Our telephone number, e-mail address, and mailing address are provided at the beginning of this chapter. Feel free to contact us. You can also consult our Web site (www.oag-bvg.gc.ca/environment).

4.9 This year we audited selected commitments made in past petition responses. Such audits will be presented regularly in the petitions chapter of our annual reports to Parliament.

4.10 We examined all 60 petitions from previous years, and selected four of them for audit (one petition, No. 25, involved two departments). Among the criteria we used in our selection were the significance of the commitment, the risk to the environment, and the timeframe given for action on the commitment.

4.11 Details of the four audits follow, and then our general conclusions about the audited commitments.

4.12 Following the audits is our annual report to Parliament on the petitions process. It reports on the petitions received between July 2002 and July 2003 and the responses produced by departments during that period; and it highlights important issues raised in petition responses.

Audits of Petition Response Commitments

Strengthening Protection Against a Toxic Substance

Petition requested federal actions

Probably carcinogenic to humans—a substance is deemed to be "probably carcinogenic to humans" when sufficient evidence that it causes cancer is obtained from studies using animals but not from studies with humans. A carcinogen is a chemical or other agent that causes cancer.

Trichloroethylene (TCE) is a toxic substance under CEPA, 1999 used as a degreasing solvent, in dry cleaning, and as an ingredient in adhesives. It can be found in household products such as paint removers, typewriter correction fluids, adhesives, spot removers, and rug cleaning fluids. TCE has been classified as "probably carcinogenic to humans" and may constitute a danger to human life or health in Canada.

4.13 Residents of Beckwith Township, a small rural community near Ottawa, discovered in March 2000 that many of their wells were contaminated with trichloroethylene (TCE). A decade ago, this substance was declared under the *Canadian Environmental Protection Act* (CEPA) to be toxic to the environment and to human health and is considered probably carcinogenic to humans.

4.14 This toxic substance was detected in the water supply of over 240 homes in the Beckwith area. TCE can enter groundwater supplies in different ways, including the mishandling of waste (including spills), inappropriate disposal by consumers, and seepage from landfill sites and contaminated soils. In the case of Beckwith, the source was an abandoned landfill site in the area.

4.15 In October 2000, our Office received an environmental petition (Petition No. 25) from the Sierra Legal Defence Fund, on behalf of the Beckwith Water Contamination Committee. The federal concerns and requests raised in the petition were addressed to the ministers of the Environment and of Health. The petitioners were concerned that seven years after TCE was declared as toxic under the *Canadian Environmental Protection Act*, no regulatory steps had been taken to control its release into the environment. They were also concerned that the Canadian Drinking Water Quality Guideline for TCE is set at 0.05 mg per litre of water, whereas the United States Environmental Protection Agency set its standard at 0.005 mg per litre of water. While the petitioners noted that several actions had already been taken, they requested that the Minister of the Environment take action to regulate trichloroethylene under the Act. They also requested that the Minister of Health ensure that the Canadian TCE guideline is as strict as, or stricter, than the U.S. standard.

Abandoned landfill site in Beckwith Township, Ontario. The source of the TCE contamination.

Environment Canada and Health Canada play a role in the management of toxic substances

4.16 Environment Canada has the lead responsibility for managing and regulating toxic substances under the *Canadian Environmental Protection Act*. Health Canada is a member of the Federal-Provincial-Territorial Committee on Drinking Water, which develops the Canadian Drinking Water Quality Guidelines that include the guideline for TCE. Health Canada serves as the technical secretariat for this committee. As the federal partner, Health Canada performs research, conducts reviews, and provides technical advice to the Committee. The information it provides forms the basis for co-operative work with the provinces and territories to establish the Canadian Drinking Water Quality Guidelines or to reassess them.

4.17 The ministers of Environment and Health responded jointly to the petition in February 2001.

4.18 **Response from Environment Canada.** In its response to the petition, Environment Canada made a significant commitment with an expected timeline for implementing the actions. The response stated:

> Environment Canada will move as expeditiously as possible to bring into force a regulation for TCE under [the *Canadian Environmental Protection Act*]... a proposed regulation is expected to be ready for publication in Part I of the *Canada Gazette* by mid-2001.

Did you know?

The total number of substances covered by the Canadian Drinking Water Quality Guidelines: **164**

4.19 **Response from Health Canada.** Health Canada stated that it was reviewing the TCE guideline and that it had given higher priority to reassessing the TCE guideline. The Minister provided the following assurance to the petitioners:

> Health Canada will expedite its review of the adequacy of the current Canadian Drinking Water Quality Guideline for TCE and work through the existing [federal-provincial-territorial] mechanism to encourage the earliest possible implementation of any forthcoming recommendations relating to the revision of the TCE guideline.

Focus of the audit

4.20 In examining whether Environment Canada and Health Canada have fulfilled the ministers' commitments to the petitioners, we asked the following questions:

- Did Environment Canada meet its mid-2001 target for publishing the proposed regulations in Part I of the *Canada Gazette*?
- Did Environment Canada fulfil its commitments to the petitioner to establish regulations for controlling the release of TCE into the environment?
- Did Health Canada review the TCE guideline in the Canadian Drinking Water Quality Guidelines and recommend revisions?
- If so, did Health Canada work through the Federal-Provincial-Territorial Committee on Drinking Water so that the recommendations would be implemented as early as possible?

Observations

Environment Canada has published TCE regulations

4.21 Environment Canada published its proposed Solvent Degreasing Regulations (which include the toxic substances trichloroethylene and tetrachloroethylene) on 7 December 2002 in Part I of the *Canada Gazette*. This was about 16 months later than its commitment had specified. The purpose of the proposed regulations was to reduce the release of trichloroethylene into the environment from facilities and industries that use solvent degreasing. The final regulations came into force on 24 July 2003.

4.22 Environment Canada's failure to publish the proposed regulations within the timeframe specified in the petition response is particularly significant. Given that TCE was declared toxic in 1993, and that the Department began to develop the regulations in 1997, these delays are difficult to justify (Exhibit 4.3).

Regulation was a challenge from the start

4.23 Environment Canada began to develop the regulations in 1997 following a consultative process with stakeholders. The stakeholders recommended that Environment Canada bring in a market-based "cap-and-trade" system that would put a three-year freeze on the amount of TCE used. After that, users would reduce the amount of the chemical used by 65 percent (Exhibit 4.4). The Minister accepted the stakeholders' recommendations and announced that Environment Canada would proceed.

Previous reports of the Commissioner of the Environment and Sustainable Development have highlighted the delays associated with the federal control of TCE and other toxic substances. For details see the Commissioner's 1999 Report, Chapter 4, and the 2002 Report, Chapter 1.

4.24 The concept of a market-based cap-and-trade mechanism for trichloroethylene created significant challenges for the Department. One challenge involved translating the concept into a regulatory instrument that would work and that could be enforced. Another challenge was the need for an extremely accurate profile of TCE users if Environment Canada was to be able to apply and enforce this regulation. According to the Department, it was a major undertaking to establish which facilities were using TCE, what they were using it for, and how much they were using.

Environment Canada faced delays in the final stages

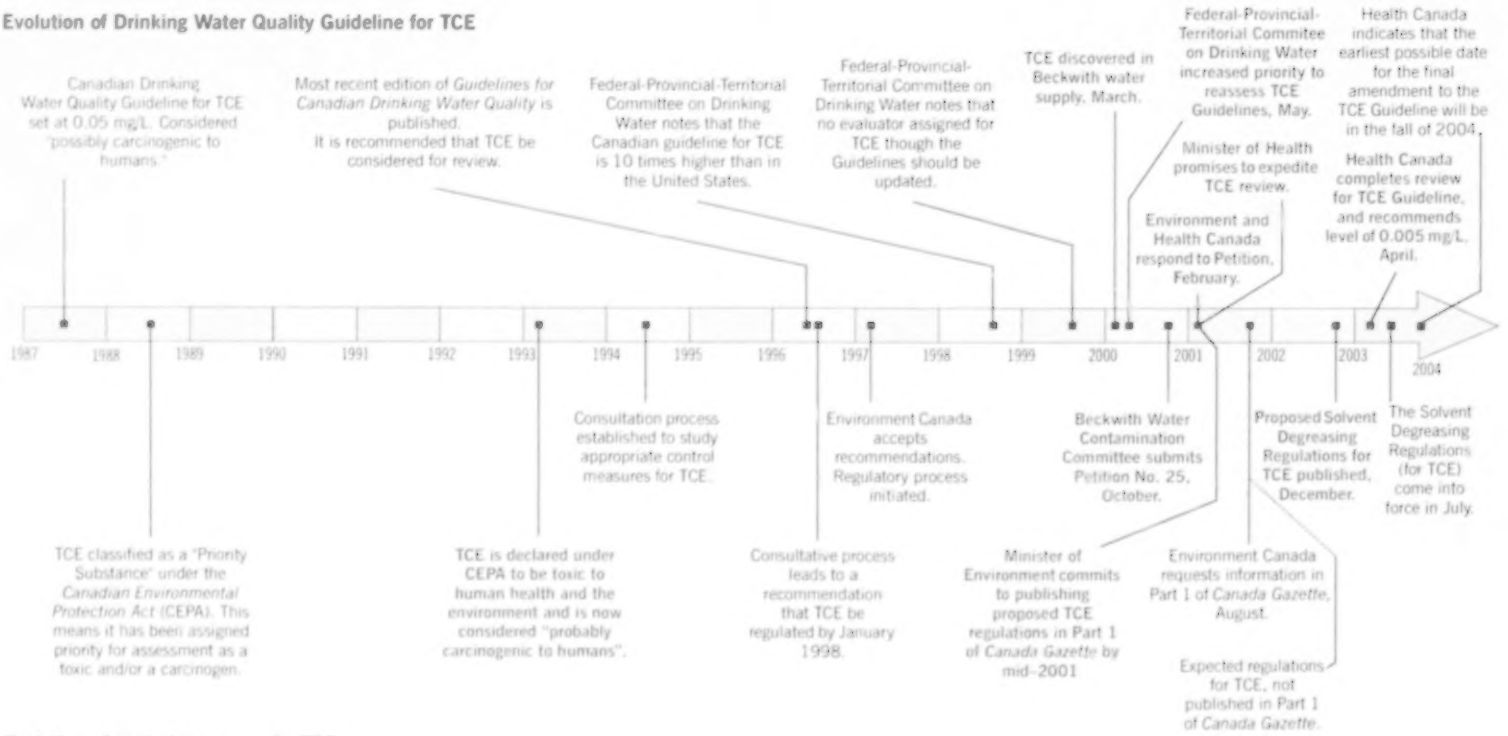
4.25 The Minister of the Environment made a commitment to the petitioners in February 2001 to have the proposed regulations published in Part 1 of the *Canada Gazette* by mid-2001, an interval of about five months. According to Environment Canada, this was a "best-case scenario" that assumed the Department understood how large the task would be and nevertheless thought it could meet the target date.

4.26 Following the commitment made by Environment Canada in February 2001, the Department met challenges that resulted in significant delays. Publication of the proposed regulations was delayed from mid-2001 to December 2002. The main cause of the delay was the Department's discovery, after the response to the petition, that the information it had about the industries that used TCE was incomplete and unreliable. At the time of the response, Environment Canada was nearing the completion of a technical draft of the proposed regulations. However, while it had compiled a list of over 2,400 industries that use TCE, it had not determined how many were using it for degreasing operations, and how much they were using. In August 2001, Environment Canada decided to issue a request in Part 1 of the *Canada Gazette* for industry information about the use of TCE.

4.27 We found that Environment Canada was overly optimistic in expecting to publish the proposed regulations within five months. Given the amount of work needed to complete the Department's information and prepare the regulations for publication, a target date of five months was unrealistic.

Exhibit 4.3 **Canada's actions to protect Canadians from trichloroethylene (TCE), a toxic substance**

Evolution of Drinking Water Quality Guideline for TCE


Canadian Drinking Water Quality Guideline for TCE set at 0.05 mg/L. Considered "possibly carcinogenic to humans."
Most recent edition of *Guidelines for Canadian Drinking Water Quality* is published. It is recommended that TCE be considered for review.
Federal-Provincial-Territorial Committee on Drinking Water notes that the Canadian guideline for TCE is 10 times higher than in the United States.
Federal-Provincial-Territorial Committee on Drinking Water notes that no evaluator assigned for TCE though the Guidelines should be updated.
TCE discovered in Beckwith water supply, March.
Federal-Provincial-Territorial Commitee on Drinking Water increased priority to reassess TCE Guidelines, May.
Minister of Health promises to expedite TCE review.
Environment and Health Canada respond to Petition, February.
Health Canada indicates that the earliest possible date for the final amendment to the TCE Guideline will be in the fall of 2004.
Health Canada completes review for TCE Guideline, and recommends level of 0.005 mg/L, April.
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
TCE classified as a "Priority Substance" under the *Canadian Environmental Protection Act* (CEPA). This means it has been assigned priority for assessment as a toxic and/or a carcinogen.
TCE is declared under CEPA to be toxic to human health and the environment and is now considered "probably carcinogenic to humans".
Consultation process established to study appropriate control measures for TCE.
Consultative process leads to a recommendation that TCE be regulated by January 1998.
Environment Canada accepts recommendations. Regulatory process initiated.
Minister of Environment commits to publishing proposed TCE regulations in Part 1 of *Canada Gazette* by mid-2001
Beckwith Water Contamination Committee submits Petition No. 25, October.
Environment Canada requests information in Part 1 of *Canada Gazette*, August.
Expected regulations for TCE, not published in Part 1 of *Canada Gazette*.
Proposed Solvent Degreasing Regulations for TCE published, December.
The Solvent Degreasing Regulations (for TCE) come into force in July.

Evolution of control measures for TCE

4.28 A full ten years after trichloroethylene was declared toxic under the *Canadian Environmental Protection Act*, the final regulations were put in place on 24 July 2003. The Department noted that the use of TCE in degreasing had declined in Canada between 1995 and 2000. It attributes this reduction in part to its work with stakeholders and the resulting awareness in the marketplace that regulations were being developed.

Exhibit 4.4 **"Cap-and-trade" mechanism**

Cap-and-trade refers to a market-based control mechanism designed to limit the use, discharge, or emission of a given substance or substances. It is often chosen as a regulatory control option to achieve an overall reduction of a substance while allowing for flexibility across various industries. The following are the key features of a cap-and-trade mechanism:

- A cap refers to a limit on the total amount of specific substance that can be either released or used. This will be set initially at a baseline level and subsequently reduced in phases.
- An allowance is an authorized fixed amount that can be used or released by an individual company.
- Trade is built into this system to allow flexibility in meeting targets. Companies can choose how to reduce the "use or release" of a substance. Companies that can reduce their use or release to below their allowance can then trade or sell the unused portion on a market to those that require amounts greater than their allowance.

Health Canada recommended strengthening TCE guideline

4.29 Health Canada is a federal representative on the Federal-Provincial-Territorial Committee on Drinking Water and has the role of technical secretariat. The Canadian Drinking Water Quality Guidelines are used by the provinces and territories to establish their own enforceable regulations, as well as objectives, or guidelines. Health Canada's role on the Committee is to carry out scientific risk assessments to support the development of new guidelines and to provide the information needed to evaluate current guidelines.

4.30 The 1987 guideline for TCE was based only on the risk from consuming trichloroethylene (Exhibit 4.3). It did not take into account the risks from inhaling it. When the chemical was declared a toxic substance under the *Canadian Environmental Protection Act* in 1993, its rating as a cancer-causing substance was raised from "possibly carcinogenic to humans" to "probably carcinogenic to humans". There was also more evidence of the potential risks from inhaling TCE while bathing or showering. The reclassification of TCE under the Act put it on the list of guidelines that the Federal-Provincial-Territorial Committee on Drinking Water had to review. With the release of the sixth edition of the *Guidelines for Canadian Drinking Water Quality (1996)*, Health Canada stated that the TCE guideline was being considered for revision because of new evidence. However, it was not until May 2000 that the Federal-Provincial-Territorial Committee on Drinking Water gave a higher priority to reassessing the TCE guideline.

4.31 In February 2001, the Minister of Health made a commitment to the petitioners to expedite the review of the Canadian Drinking Water Quality Guideline for TCE. While the Department did some preliminary work, it knew that the U.S. Environmental Protection Agency-Science Advisory Board was reviewing the health risk assessment of TCE. It decided to wait for the results before re-examining Canada's TCE guideline. In spring 2002, eight months after the Department received the U.S. document, Health Canada initiated its full reassessment of TCE. The reassessment was completed in April 2003.

Actions taken following some delays

4.32 Although 26 months had passed from the date of the commitment to review the TCE guideline until the review was completed, we found that Health Canada met the commitment to the petitioners. Health Canada cites three reasons for the delay that occurred between the commitment and its completion of the review.

- Health Canada received the United States Environmental Protection Agency data eight months later than expected. There was a further delay of eight months before an evaluator was available to do the review. It was completed by April 2003.
- Over the same period, Health Canada dealt with other issues that took priority, including the aftermath of the tragedy in Walkerton, Ontario. The Department stated that the review of the TCE guideline was occasionally delayed when the staff members assigned to the job were reassigned to other urgent issues.
- Health Canada used a new approach to review the TCE guideline. It said that the complexity of the approach added more time to the review process. Health Canada has stated that once this approach is established, the Department will apply it to review other substances similar to TCE. By mid-July 2003, the science on which the new approach was based had undergone the required external peer review. Health Canada will now need the approval of the Federal-Provincial-Territorial Committee on Drinking Water to proceed with a four-month national consultation process. The results of the consultations will be taken into account before the TCE guideline is formally amended. Final approval rests with the parent committee of the Federal-Provincial-Territorial Committee on Drinking Water, which is the Federal-Provincial-Territorial Committee on Environmental and Occupational Health.

4.33 As a result of its own review, completed in April 2003, Health Canada concluded that a TCE guideline stricter than the current level of 0.05 mg per litre was required. It recommended a new standard based on the collected evidence and available technologies. The recommended level—0.005 mg per litre—would be equivalent to the current U.S. standard, although the basis for the Canadian determination differed significantly from that of the U.S. Environmental Protection Agency.

Did you know?

The last amendment to the Canadian Drinking Water Quality Guidelines was Cyanobacterial Toxin Microcystin-LR (toxin produced by blue-green algae). Discussions began in 1994 on a Canadian guideline for this substance. The final stages of the approval of the guideline were completed in 2002.

4.34 At the April 2003 semi-annual meeting of the Federal-Provincial-Territorial Committee on Drinking Water, Health Canada was not ready to present its recommendation for revising the Canadian Drinking Water Quality Guideline for TCE. The Department told us that since the external peer review was completed only in mid-July 2003, Health Canada will seek the Committee's approval to proceed with national public consultations by the next semi-annual meeting in October 2003. The Department told us, however, that a document would likely not be ready for these consultations until either January or February 2004. This means that the earliest possible amendment of the TCE guideline would be in the fall 2004.

Conclusion

4.35 Both Environment Canada and Health Canada met their petition commitments. Environment Canada published its proposed Solvent Degreasing Regulations (for trichloroethylene and tetrachloroethylene) in December 2002, although this did not meet the target dates stated in the petition response. The final regulations were brought into force on 24 July 2003, fulfilling the commitment to the petitioners.

4.36 After some delays, Health Canada had reviewed the Canadian Drinking Water Quality Guidelines for TCE by April 2003 and was currently preparing to work with the Federal-Provincial-Territorial Committee on Drinking Water on a process to amend the TCE guideline. As the quality of drinking water is primarily a provincial responsibility, we found that Health Canada has substantially fulfilled the commitment made in the petition response. However, it will take at least until fall 2004 to complete the amendments to the TCE guideline. The Department still has a role during this period in ensuring that the updated TCE guideline is approved by the Federal-Provincial-Territorial Committee on Drinking Water and published for use by all provinces and territories.

Ensuring Compliance at a Manitoba Pulp and Paper Mill

Petition raises concerns about enforcement of federal regulations

4.37 The Pine Falls mill (now known as the Pine Falls Operations and owned by the Tembec Paper Group since 1998), has operated for over 70 years beside the Winnipeg River north east of Winnipeg, Manitoba. The mill produces newsprint for domestic and international markets. It became subject to federal environmental regulations in 1992, when an updated version of the Pulp and Paper Effluent Regulations under the *Fisheries Act* came into effect. The previous set of regulations, dating back to 1971, had not applied to older mills like the one in Pine Falls.

Outfall pipe leading to the Winnipeg River at the Pine Falls Pulp and Paper Mill, Manitoba.

4.38 The 1992 Regulations established tighter pollution controls on effluents being discharged into Canadian waters from pulp and paper mills: they obliged mills to monitor their discharges frequently and report the results to federal authorities. The Environmental Effects Monitoring Program is an innovative feature of the regulations. Mills are required to submit a plan for monitoring how their discharges are affecting fish and the aquatic environment around the mill, and they must report the results of their monitoring within a set timeframe.

4.39 Effluent from the Pine Falls mill discharges into the Winnipeg River. The river is the source of drinking water for the Sagkeeng First Nation; it also supports a recreational fishery.

4.40 Petition No. 19 was submitted in November 1998 by a Manitoba resident, Alice Chambers, who alleged that:

- Environment Canada had ignored numerous spills and discharges that were above the regulated limits, and thus it had not ensured that the mill's effluent was not polluting the Winnipeg River.
- It had not charged the mill for failing to comply with the requirements of the Environmental Effects Monitoring Program.

4.41 Environment Canada is responsible for administering and enforcing the *Fisheries Act* provisions for preventing pollution. Its officials in the Winnipeg Regional Office are responsible for enforcing compliance with the regulations; a co-ordinator in the Edmonton regional office manages the Environmental Effects Monitoring Program.

4.42 Fisheries and Oceans Canada and Environment Canada jointly developed a Compliance and Enforcement Policy (finalized in 2001) to guide departmental officials in administering and enforcing the Pulp and Paper Effluent Regulations. Enforcement activities include inspections to monitor or verify compliance, investigations of alleged violations, warnings, directions by inspectors to alleged violators, ministerial orders, and ultimately, injunctions and prosecutions.

Minister committed to ensuring compliance with regulations

4.43 In April 1999, the Minister of the Environment responded to the petitioner's concerns about the Pine Falls mill. She affirmed that Environment Canada's overarching goal is to ensure compliance with all of its regulations, including the limits on effluent discharges and the monitoring of environmental effects under the Pulp and Paper Effluent Regulations.

Focus of the audit

4.44 The overall objective of our audit was to determine whether, since responding in April 1999 to the petition, Environment Canada had taken action to ensure that the mill was in compliance with the regulations. We asked whether the Department had

- conducted regular inspections and taken other action to determine whether the mill had complied with the discharge limits;
- determined whether the documents for the Environment Effects Monitoring Program submitted by the mill were adequate; and
- taken active steps to enforce the discharge limits if the mill had not complied with the regulations.

4.45 We interviewed Environment Canada staff responsible for compliance and enforcement for the mill in Pine Falls. We reviewed compliance and enforcement records on the mill and reviewed monitoring data and other related documents that the mill had submitted to the Department.

4.46 A full examination of the Environment Canada's compliance and enforcement program was beyond the scope of this audit.

Observations

Strict effluent limits set out in the 1992 regulations

4.47 Under the 1992 regulations, Canadian pulp and paper mills are prohibited from discharging effluent that is acutely lethal to fish. Mills are, however, permitted to discharge certain other "deleterious substances" within allowable levels (total suspended solids (TSS) and biological oxygen demand (BOD)). If discharging effluent, a mill must adhere to a number of conditions. Among other things, a mill operator must:

- install, maintain, and calibrate monitoring equipment and keep records;
- monitor treated effluent and submit test results to federal officials monthly; and
- report test results that exceed the discharge limits.

Prior to the 1998 petition, the mill was authorized to exceed the discharge limits

4.48 As an older mill, the Pine Falls paper mill was able to apply for and obtain temporary authorizations from Environment Canada to exceed the stipulated discharge limits by a specific amount until 31 December 1995. Nevertheless, it did violate these higher limits on some occasions. In most of those cases, Environment Canada chose to work with the mill co-operatively rather than taking punitive enforcement action. By the end of December 1995, the mill had installed a new system for secondary treatment

of effluent. Environment Canada records indicated that in 1996 the new treatment system was performing effectively with reported discharges regularly within the limits allowed.

The mill's monitoring data showed that subsequently, limits were occasionally exceeded

4.49 The mill regularly submitted monthly reports about its daily, weekly, and monthly results of effluent monitoring to Environment Canada whose enforcement staff reviewed them.

4.50 Since the response to the petition in April 1999, the mill's monitoring program revealed only a few violations. The first was in July 2001. In this case, the mill's effluent failed to meet the test for acute lethality—that is, more than 50 percent of rainbow trout subjected to the effluent were killed. The regulations require the mill to re-test, and it did. Environment Canada inspectors monitored the situation and, following remedial action by the mill, concluded that there had been no further violations. We note that the mill's effluent also failed the acute lethality test in May 2003 and failed a re-test in June 2003. Environment Canada was still investigating the matter at the end of our audit.

4.51 In 2001, the mill switched from a chemical pulping process that used acid and sulphur to turn wood chips into pulp. Its new process involves thermo-mechanical pulping that uses steam and mechanical energy. The mill operators believe that this change has resulted in significant improvements in the quality of effluent discharged by the mill.

Annual inspections not consistent

4.52 As a general rule, Environment Canada inspects the mill once a year and takes its own effluent samples. It has the samples analyzed at its laboratory in Edmonton to verify the mill's monitoring results and ensure that the mill is meeting the regulatory requirements.

4.53 We identified areas for improvement in Environment Canada's inspections of this mill. We observed that the mill was not inspected in 1999, the year the Minister responded to the petition. Documentation to confirm that the mill was inspected in 2000 was limited to a single effluent sample. There were documented inspections in 2001, 2002, and 2003. Therefore, there was a three-year gap between full and documented inspections in 1998 and 2001.

4.54 Because it inspects the mill only once a year, it is important for the Department to ensure that each inspection reviews all compliance requirements. We found that inspections of this mill could have been more thorough, consistent, and comprehensive had they used a checklist of the requirements to ensure that all were reviewed. In fact, we found that Environment Canada's inspectors had not checked all of the compliance requirements outlined in the regulations.

Environmental Effects Monitoring Program in place after a slow start

4.55 The Environmental Effects Monitoring Program helps determine whether the pollution limits set in the regulations adequately protect fish, fish habitat, and the use of the fisheries resources that live in the waters in the vicinity of a mill. Mills must submit monitoring plans, studies, and reports every few years for review by a technical panel and by the Department. The first cycle of studies under this program was due on 1 April 1996, and the second cycle in 2000.

4.56 Before the petition was submitted in 1998, the mill had missed several deadlines to submit its studies. Further in 1996 and 1997, Environment Canada had informed the mill that the cycle one studies it had submitted had problems with the quality of information and the data. The Department warned that enforcement action was a possibility.

4.57 After more than a year of dialogue, Environment Canada officials and mill representatives met and agreed that the major deficiencies identified in the first cycle would be addressed in the second cycle of studies. Environment Canada received the cycle two studies from the mill by April 2000, and was satisfied that it had met the monitoring requirements.

4.58 Under the monitoring program, the mill is also required to submit toxicological data to Environment Canada, which is incorporated into a national effluent database. Although the mill did the necessary sampling and arranged for testing, it did not always submit the test results to Environment Canada on time. The Department issued a warning in 2003 after the mill failed to submit its 2002 summer data within the allowed time.

Conclusion

4.59 We have concluded that the Minister's commitment to ensure that the regulations have been complied with has been substantially met in the case of the Pine Falls mill.

4.60 Environment Canada has continued to monitor the mill's compliance. The Department's compliance and enforcement activities and documentation, supported by data from the mill, shows that the mill is generally complying with the pollution limits set out in the Pulp and Paper Effluent Regulations under the *Fisheries Act*.

4.61 Environment Canada and the mill at Pine Falls have addressed the mill's early non-compliance with the requirements of the Environmental Effects Monitoring Program. Nevertheless, since the petition and response, the mill has been late submitting toxicological data required under the monitoring program.

4.62 The Department needs to ensure that it has a consistent and comprehensive approach in place, for example, by using checklists to guide inspections to facilitate a thorough review of the compliance requirements under the regulations. We note that Environment Canada has now started to use a checklist during its mill inspections.

Ensuring Public Access Under the *Canadian Environmental Assessment Act*

Petition challenged restrictions on access to an important environmental assessment report

4.63 One of the guiding principles in the *Canadian Environmental Assessment Act* is giving the public an opportunity to participate in the environmental assessment process. To realize this goal, the Act provides for public access to information on projects undergoing an assessment.

4.64 These principles were put to the test in 2001 after Bounty Bay Shellfish Inc. announced plans to expand its mussel farm in St. Ann's Harbour, Cape Breton. If completed as planned the mussel farm would reportedly be one of the largest aquaculture operations in North America.

4.65 This proposal was subject to an environmental assessment by federal fisheries officials. The proposal also sparked some debate when copyright and other restrictions were placed on an important environmental impact report that the company submitted to Fisheries and Oceans Canada to support the assessment.

4.66 In May, 2001, Dr. William Fitzgerald submitted an environmental petition to our Office (Petition No. 28) after he and other residents in the area could not obtain a copy of the report.

4.67 The mussel farm proposal needed approval under section 5 of the *Navigable Waters Protection Act*. This requirement, in turn, triggered the application of the *Canadian Environmental Assessment Act*. As the responsible authority, Fisheries and Oceans Canada had to assess the environmental effects associated with the project before deciding whether to issue the necessary federal approval to Bounty Bay.

4.68 Habitat assessors across the six regions of the Habitat Management Program of Fisheries and Oceans Canada co-ordinate and conduct these assessments, sometimes with the help of other federal departments.

4.69 The *Canadian Environmental Assessment Act* requires that the responsible federal authorities place on a public registry such documents as reports from project proponents and all other records related to an environmental assessment. The Act requires that the authorities make these documents available to the public upon request.

The Minister committed to ensuring public access to environmental assessment records

4.70 The Minister of Fisheries and Oceans responded to the petition at the end of October 2001. He directly addressed the petitioner's concerns about restricted access to the Bounty Bay report and indicated that the Department had taken steps to prevent similar problems from recurring in the future:

> [The Department] has re-evaluated its procedure for dealing with such documents by notifying proponents that documents

needed to conduct an environmental assessment will not be accepted by the Department if they cannot be shared with interested parties.

4.71 The Department confirmed that this new notification policy applies in all cases where it acts as a responsible authority, anywhere in Canada.

4.72 The commitment was reaffirmed in April 2002 when the Minister indicated in a letter to two Cape Breton residents that "actions have been taken within [the Department] to ensure that the copyright issue does not occur in the future."

Focus of the audit

4.73 We wanted to determine whether Fisheries and Oceans Canada had put its new notification policy into effect. This notification to proponents would help to ensure that documents collected under the federal environmental assessment process would be available to all interested parties, including members of the public.

4.74 In examining whether the Department has fulfilled its commitment, we asked the following questions.

- Did Fisheries and Oceans Canada ensure that adequate steps were taken to implement the policy to notify proponents about the requirements of the Act for public access and the public registry?
- Did the Department track results to assess whether it had fulfilled its commitment?

4.75 We expected that proponents would be formally notified when the Department determined that an environmental assessment was required for a project.

4.76 The Minister's October 2001 response to the petition suggests that the Department was already making changes to respond to the issues that came to light in the Bounty Bay project. Given that one and a half years had elapsed between the Minister's response and this audit, we expected that the new policy would have been fully implemented and the results tracked.

Observations

Fisheries and Oceans Canada developed a notification package

4.77 When we started our audit, officials with Fisheries and Oceans Canada immediately directed our attention to a special notification package that the Department had developed in the summer of 2001. We were told that this package could be used when the *Canadian Environmental Assessment Act* is triggered. It would serve as the notification to proponents that the Minister had promised when responding to the petition.

4.78 This notification package, referred to as the proactive package or public registry package, includes a letter to project proponents. It also includes information about the requirement that the federal government provide for public participation in the federal environmental assessment

process, specifically, that it establish a public registry of records related to an environmental assessment, ensure convenient public access to the public registry, and release documents on the environmental assessment to the public.

To date, use of the notification package is discretionary

4.79 One and a half years since the launch of the proactive package, its status is unclear. Fish habitat assessors across the country have been asked to try out the package, but they are not required to use it. Regional directors have not yet approved the package; it is not required as a matter of official department policy.

4.80 Furthermore, our review of internal documents suggested that departmental headquarters was promoting the package primarily for high profile projects—those that "could garner much public interest and will likely lead to public registry requests"—not for all projects undergoing an environmental assessment.

The Department did not ensure that proponents were notified

4.81 Since the proactive package has not received official approval, we decided to determine whether the Department notifies project proponents about the requirements to provide for a public registry and public access. If the Department was notifying project proponents, we wanted to review the process they used.

4.82 We requested samples of recent notification letters sent to proponents from each of the six regions of the Department's Habitat Management Program. These are letters sent to proponents announcing that their proposed project is subject to an environmental assessment under the *Canadian Environmental Assessment Act*. Where necessary, we also interviewed regional staff.

4.83 Based on our review, we found the following:

- The Maritimes Region was using the proactive notification package fairly consistently. It was the only region to do so.
- Two other regions were also providing sufficient notification about public access and the public registry, and they were doing it on a consistent basis. These regions—Gulf and Quebec—were notifying proponents through various means, including notification letters.
- In the Central and Arctic Region, notification via a letter was done in some cases and not in others; when it was done, the message being communicated was not sufficiently clear.
- In the two remaining regions—Pacific and Newfoundland—formal notification about public access and the registry was not done at all.

The Department did not complete essential steps to implement its commitment

4.84 We found little evidence that the commitment to notify proponents has been integrated into departmental policies and procedures:

- A departmental procedures guide—originally an internal document and now available to the public and proponents via the Department's Web site—does not include any information on the new notification policy promised by the Minister. A sample notification letter, which we were advised is outdated, is provided with the guide. It contains only a brief reference to the requirement that all documents from the proponents that support the environmental assessment must be made available to the public, as part of the federal environmental assessment process.
- Another template notification letter available to assessors through the departmental internal habitat tracking system also contains only a brief reference to the public access requirements under the *Canadian Environmental Assessment Act*.

Key departmental staff were not aware of the commitment until our audit

4.85 Key staff based in headquarters and three of the six regions told us that they first became aware of the commitment when they were notified through various means in February 2003 that we intended to conduct an audit.

4.86 We found no evidence that the commitment or any implementation plan was systematically communicated to departmental staff.

4.87 As a result, the Department was not taking the next steps; it was not actively monitoring whether proponents were being notified in the various regions. Nor was it tracking the results of any such notification.

Regions institute new notification protocols as a result of our audit

4.88 During the course of our audit, the Pacific Region and the Central and Arctic Region sent out new directives to ensure consistent notification of proponents in the future. Departmental officials told us that our audit was one of the factors behind the decision to take that action.

Conclusion

4.89 We have concluded that Fisheries and Oceans Canada has not fully, or substantially, implemented its new notification policy as promised in the petition response. The Department has failed to take several of the important first steps crucial to fulfilling the Minister's commitment.

- The notification changes stated in the response to the petition have not been formally integrated into the Department's policies and procedures.
- The commitment, as stated in the petition response, and the Department's plan to implement it were not systematically communicated to departmental staff.
- Only three of six regions were consistently notifying proponents about the requirements for public access to all environmental assessment records and their listing on the public registry. In two regions, no notification was sent at all.

- New notification procedures were put in place in certain regions, partly as a result of our audit.

4.90 Recommendation. Fisheries and Oceans Canada should begin to implement the commitment made in its response to Petition No. 28 to ensure public access to environmental assessment records. It should develop an action plan for implementation that includes obtaining formal approval of the notification policy and communicating the policy to staff. It should track results to ensure that the commitment is implemented consistently across the country.

Fisheries and Oceans Canada's response. Recommendation accepted. Project proponents will be advised that information in documents they submit should be able to be made available through the public registry established pursuant to the *Canadian Environmental Assessment Act* (CEAA). Information related to the provisions of the *Access to Information Act* and the *Privacy Act* will be included in the notification.

A policy directive will be issued requiring all staff to use a CEAA notification letter to all proponents when the Department is the lead responsible authority. This notification will include information about the CEAA requirements for public access to environmental assessment documents that proponents submit to the Department. A protocol will also be implemented requiring staff to record this action in the Department's Habitat Referral Tracking System. These actions are to be completed by November 2003.

Enhancing Access to Environmental Studies Funded by the Canadian International Development Agency

Petition requested details about CIDA's funding of a study on proposed dam in Belize

4.91 In June 2002 Probe International, a Toronto-based organization, requested information (Petition No. 41B) about CIDA's financial contribution to environmental studies of a proposed hydro dam project in Belize, Central America. The organization also requested that the Minister clarify the Agency's requirements for environmental assessments of projects outside Canada, particularly hydro dams. Probe International asked that environmental assessment documents be made available to the public.

Aerial view of Macal River, Belize, site of proposed hydro dam.

Photo: Grainne Ryder (Probe International)

4.92 When the Agency funded environmental studies related to hydro dam projects that were outside Canada and that were not subject to the *Canadian Environmental Assessment Act*, it provided access to these studies through the *Access to Information Act*. This was the situation when Petition No. 41B was submitted.

4.93 The Agency is the lead federal government organization responsible for Canadian international co-operation; it plans and implements most of Canada's international development co-operation program. Part of the Agency's mandate is to support sustainable development in developing countries in order to reduce poverty and contribute to a more secure, equitable, and prosperous world. The Agency helps fund environmental assessments of infrastructure projects outside Canada to support the generation of social, economic, and environmental information. The Agency says that by providing this information, the host country is in a better position to make informed decisions on proposed projects.

The Minister committed to making CIDA-funded environmental studies available on the Internet

4.94 In October 2002, the Agency made the following commitment in its reply to Petition No. 41B when asked what its policy was on funding studies related to hydro dams:

> For new proposals submitted to the Agency for the funding of studies related to hydro dams, the Agency requires that… the [funded] company makes initial and full environmental assessments, and social impact studies, available on the Internet prior to public consultations.

Officials maintain that this commitment currently applies only to hydro dam projects and the related environmental studies. (For other information on CIDA's response, see paragraph 4.136.)

Focus of the audit

4.95 We set out to determine whether CIDA requires that companies submitting new proposals for the funding of studies related to hydro dams make their initial and full environmental assessments and social impact studies available on the Internet before public consultations.

4.96 In examining whether the Agency has implemented its commitment, we asked the following questions:

- Has CIDA put measures in place requiring that before public consultations on new proposals for hydro dams, companies who receive funding from CIDA post their initial and full environmental assessments and social impact studies on the Internet?
- Has CIDA made changes to its practices that are necessary to implementing the commitment, including making its scope and application clear and explicit to its staff?

Observations

The Agency's commitment followed an internal review of its contributions to proposed hydro dam projects

4.97 When Petition No. 41B was submitted in June 2002, an internal group was already reviewing the Agency's contributions to the funding of dam projects and related environmental studies.

4.98 In early summer 2002, the internal group completed a two-page report. Among the key findings were that the Agency needed to

- reduce perceived bias in environmental studies by requiring funded companies to make their environmental assessments public, and
- require funded companies to hold public consultations earlier in the study process to develop a comprehensive list of environmental and social impacts.

The report stated that "earlier and regular public availability of environmental assessments would contribute to the Agency's transparency and avoid the appearance of secrecy or reactivity."

4.99 The report recommended that the Agency

- require funded companies to conduct a preliminary assessment of potential positive and negative developmental impacts and to hold public consultations on the preliminary assessment;
- produce a document for use by companies that would specify the information and procedures required of dam projects;
- require funded companies to make initial and full environmental assessments and social impact studies available on the Internet before the start of public consultations; and
- post abstracts of and links to these studies on CIDA's own Web site.

4.100 The internal group's report concentrated on hydro dams but stated that "its findings are relevant for all large infrastructure projects." Nevertheless, the Agency decided to apply its new set of requirements to environmental studies related only to hydro dams.

4.101 The requirements became effective as of July 2002, after the Agency's President had reviewed and approved the report.

The Agency's commitment is not entirely clear

4.102 Under the commitment outlined in the response to Petition No. 41B, a company receiving funding from CIDA for environmental studies related to hydro dam projects must post its reports on the Internet. Where this information is to be posted on the Internet is not spelled out as CIDA did not specify any particular Web site. This leaves people wondering where to access this information: Would it be posted on the Agency's Web site, on the company's Web site, or elsewhere?

On the Macal River, Belize.

Photo: Grainne Ryder (Probe International)

4.103 In addition, companies are also required to make these studies available before public consultations. However, CIDA officials say that public consultations in host countries are not always certain. Nevertheless, the Agency indicated that it will require companies to post their reports on the Internet whether or not public consultations are held. This is not set out clearly in CIDA's commitment.

The Agency's new requirements are not fully known or implemented

4.104 No official documents were circulated in the Agency to announce the new requirements emerging from the internal review and to explain how they would affect operations. Officials told us that they had communicated the requirements to program managers orally and by e-mail. Although program managers are responsible for reviewing project proposals and preparing contribution agreements for approved projects, the Agency did not provide them with comprehensive documentation informing them when the new requirements became effective, when, and how companies needed to be informed and by whom.

4.105 The e-mail sent to program managers on 8 July 2002 that communicated the new requirements mentioned the need for a number of actions, including the following:

- a redrafting of the report as a guideline for staff; and
- a formal version of the guidelines for the Agency's Web site and other uses.

As of June 2003, the Agency had taken no action to prepare these items.

4.106 We tested the level of knowledge of several program managers about the new requirements. We included both those managers who have and do not have recent involvement in hydro dam project proposals. Although the program managers were aware that the new requirements existed, only one was aware of the specific details.

4.107 To date, no document that provides information about the Agency's commitment and the procedural requirements for hydro dam projects has been developed for use by companies, as recommended by the internal review group. The Agency intends to proceed without such a document until it has processed several new proposals related to hydro dam projects. The Agency indicated that at a later date, it would decide whether or not such a document is necessary.

Inconsistent approach to the notification of companies

4.108 There is no consistent approach to notifying companies about CIDA's new requirements. In one case, CIDA included the new requirements in the contribution agreement with a company that had submitted a proposal related to studies for a hydro dam project in the Dominican Republic. The company was notified of the new set of requirements by e-mail in July 2002, when the Agency began to implement them. The company agreed to the requirements, and the contribution agreement was adjusted to reflect them.

4.109 In contrast, a new proposal for an environmental study of a hydro dam project in India was submitted to the Agency on 15 November 2002. As of June 2003, the company that submitted the proposal had not been officially notified in writing of the Agency's new requirements. However, company officials indicated that the Agency had made them aware of the new requirements through discussions.

Conclusion

4.110 In its response to Petition No. 41B, submitted by Probe International, the Minister for International Co-operation made a commitment to enhance access to environmental assessments funded by CIDA for infrastructure projects that involved hydro dams. We found that the Agency's commitment is not fully implemented yet.

4.111 **Recommendation.** The Canadian International Development Agency should develop and circulate an official document clearly explaining its new set of requirements for enhancing public access to the environmental studies it funds. The document should be provided to both the Agency's program managers and companies that submit environmental study proposals related to hydro dam projects. Further, the Agency should promote and ensure compliance with the requirements.

CIDA's response. The Agency is pleased that the audit found that the sole Agreement subject to its new requirement that companies make dam-related environmental assessments available on the Internet, prior to public consultations, reflected this requirement. The Agency will formalize its current process of informing staff and partners on its requirements to make dam-related environmental assessments available on the Internet prior to public consultations. It will also institute a monitoring process to ensure compliance with the requirements. These actions will be completed by the second quarter of 2004–2005.

Conclusion

4.112 Our four audits found mixed results. In the four cases, departments have addressed all the commitments to some degree and have substantially implemented some challenging commitments. At the same time, however, relatively simple policy and procedural changes have been implemented poorly, with delays in some cases and inadequate communication of new requirements or procedures to departmental staff and project proponents.

4.113 Specifically, in the four audits we found the following:

- Environment Canada met its commitment to develop a regulation for the toxic substance trichloroethylene, albeit later than its target, and ten years after it was declared a toxic substance. The Department of Health has met its commitment to review the Canadian Drinking Water Quality Guideline for trichloroethylene and is recommending tightening of the guideline.
- Environment Canada has substantially met its commitment to assure itself that a pulp mill in Manitoba is in compliance with regulatory discharge limits and environmental effects monitoring requirements.
- Fisheries and Oceans Canada has not met its commitment: it has failed to take the first steps crucial to implementing a new policy to notify project proponents about public access requirements under the *Canadian Environmental Assessment Act*.
- The Canadian International Development Agency has not met its commitment: it has not fully implemented a new requirement designed to enhance public access and public participation in environmental studies it funds for proposed hydro dam projects outside of Canada.

4.114 Implementing a petition commitment requires a number of steps. A department needs to

- clearly identify the commitment and what it means for the department,
- plan its implementation,
- carry out the planned implementation,
- communicate any changes as required, and
- determine that the commitment has been met.

In two cases that involved increasing public access to environmental information and studies, these steps were not evident, as the lack of results show.

About the Audits

Objective

The overall objective of the four audits was to review commitments made by ministers in their formal responses to selected petitions and determine whether and how well the commitments had been implemented.

Criteria

We expected that departments would have fully acted on commitments made to petitioners.

From this criterion, we developed specific questions to be examined in each audit as described in each section under "Focus of the audit."

Scope and approach

In determining which petition responses we would audit, we reviewed all petitions and responses received by 15 July 2002 (the last date for inclusion of a petition in last year's Report). We selected the four petitions for audit using the following criteria:

- materiality/significance of the issue,
- risk that Canadians were not getting value for money and risk to the environment,
- sensitivity of the issue,
- federal mandate,
- availability of evidence/objectivity of information about the issue and the commitment made,
- auditability,
- timeliness, and
- relationship to local and community concerns.

We conducted interviews and field work to determine whether and how well the commitments were being met. We collected data and evidence of the implementation of the commitment, along with appropriate documentation. Some quantitative information in this chapter is based on data that the respective departments provided directly to us or under legislation requiring self-reporting. We have considered and evaluated these data carefully but, unless otherwise indicated, they should be treated as unaudited.

Audit team

Principal: Neil Maxwell
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Annual Report on Petitions (From 16 July 2002 to 18 July 2003)

Development of the petitions process

4.115 Use of the petitions process continues to grow. Since our last Report to Parliament in October 2002, 38 new petitions have been received (compared to 28 last year and 6 the year before). This increase suggests that the petitions process continues to gain momentum (Exhibit 4.5). We are also seeing new types of petitioners this year. These include a member of a provincial legislature and elementary and university students.

4.116 Petitions cover a wide range of local, regional, national, and international concerns. Petitions are received from all over the country (Exhibit 4.6). Many continue to come from individuals and local groups concerned about local environmental issues that affect them and their communities.

4.117 New issues have emerged in this year's petitions. The list of environmental issues covered by petitions expanded this year to include endangered species, contaminated federal land and harbours (including former military training sites), environment and trade, the effects of genetically-engineered crops on soil, radioactive waste, invasive species, nuclear liability, and the transboundary movement of hazardous waste. One petition (No. 64) deals with an issue that goes to the heart of "greening" the federal government. It asks how several federal departments are applying a Cabinet directive requiring that environmental factors be taken into account in decisions on new federal policies, plans, and programs.

4.118 The ecological integrity of the Great Lakes is beginning to figure more prominently in recent petitions, as are wetland protection, wildlife, and energy and energy technologies.

Exhibit 4.5 **Petitions received by year, 1996-2003**

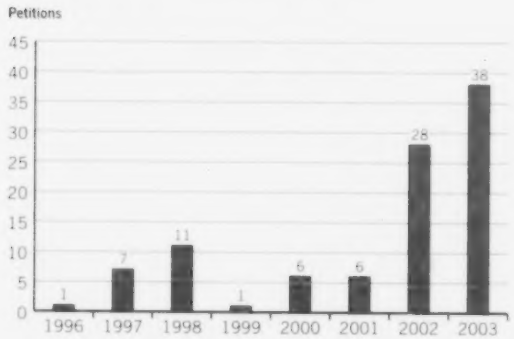
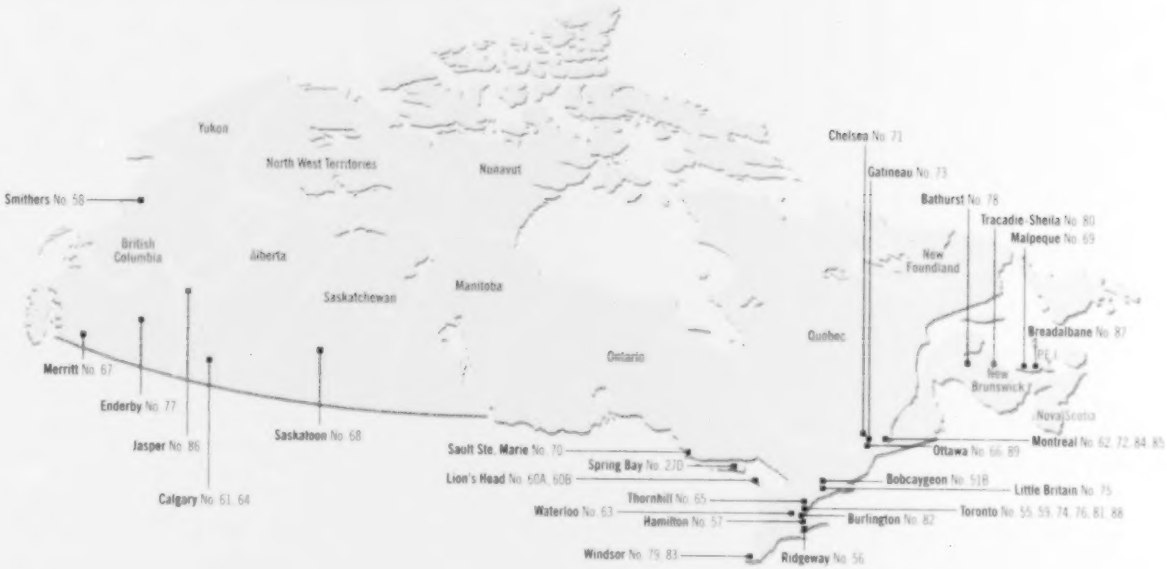


Exhibit 4.6 **Petitions received by location of the petitioner (16 July 2002 to 18 July 2003)**



Petition No.	Subject
27D	Destruction of fish habitat from railway decommissioning in Algonquin Provincial Park, Ontario
51B	Protection of fish habitat from proposed boat launch on the Trent-Severn Waterway
55	Air pollution and air quality
56	Invasive species in the Great Lakes
57	Coal tar contamination in Hamilton Harbour
58	Non-renewable energy subsidies
59	Proposed redevelopment of Oshawa Marina
60A	Nuclear liabilities
60B	Nuclear liabilities
61	*Species at Risk Act*
62	Toxic waste disposal
63	Ratification of Kyoto Protocol
64	Strategic environmental assessments
65	Federal funding of fuel cell research
66	Car assembly plants and the Kyoto Protocol
67	Implementation of Rio principles for Indigenous people
68	Aerial pesticide spraying in a national park
69	Wind turbine complex on Malpeque peninsula
70	Protection of water levels in Rocky Island Lake

Petition No.	Subject
71	Access road to Mackenzie King Estate in Gatineau Park, National Capital Region
72	Protection of environmentally sensitive federal land
73	Environmental assessment of a highway extension through Gatineau Park, National Capital Region
74	Ecological integrity of the Great Lakes
75	Boat mooring development in wetlands along the Trent-Severn Waterway
76	Low-level radioactive waste in Port Hope, Ontario
77	The relationship between economic growth, trade, and environmental protection
78	Clean-up of contaminated military training area in Tracadie, New Brunswick
79	Air quality, cancer rates, and the health in the residents of the Windsor area
80	Clean-up of contaminated military training area in Tracadie, New Brunswick
81	Environmental assessment for the proposed fixed link to the Toronto City Centre Airport, Toronto Islands
82	Environmental impacts of an expressway in Hamilton
83	Health and environmental impacts of poor air quality
84	Genetically engineered crops and soil health
85	Biosafety, World Trade Organisation, and genetically modified organisms
86	Expansion of commercial operations in Jasper National Park
87	Advertising and pesticide regulations
88	The development of genetically modified wheat
89	Potential lead contamination and fish habitat

4.119 More departments are receiving petitions. As the range of topics addressed in petitions widens, departments that received few petitions in the past are now receiving more. One department was petitioned this year for the first time (Public Works and Government Services Canada).

4.120 We are seeing more repeat petitioners. Some petitioners have submitted several petitions that address different issues. Others who have received responses from federal departments have submitted follow-up petitions to probe the same issues further—essentially establishing an ongoing dialogue with federal ministers and departments. For example, Algonquin Eco Watch has joined with three other organizations to submit four successive petitions (Nos. 27A to 27D).

4.121 Parliamentary awareness of the petitions process is increasing. Parliamentary committees have referred to and inquired about petitions and petition responses. We received two petitions from members of Parliament this year. Petition No. 78, from New Brunswick M.P. Yvon Godin, raised questions about the clean-up of a former military training range in Tracadie, New Brunswick. Petition No. 79 from Joe Comartin, M.P., asks Health Canada and Environment Canada to investigate air quality problems in Windsor, Ontario, and possible links between pollution and cancer rates in that area. A Quebec M.P., Hélène Scherrer, featured an article on the petitions process in her newsletter to constituents.

4.122 Petitions and responses are available on the Web. The Appendix to this chapter presents an overview of petitions received during our reporting period (16 July 2002 to 18 July 2003) and the petitions to which a response was pending when we released our Report last year. Subject to the petitioners' consent, petitions and responses are published in our petitions catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf/english). A paper version of the petitions catalogue, containing petitions and responses received during our reporting period, is published to accompany copies of this Report tabled in Parliament. Given that the petitions and responses are on the Web site, paper copies will be available only upon request.

Departmental responses to petitions

4.123 Our monitoring of petition responses. As part of the Commissioner's responsibility to monitor petition responses from departments and agencies, we consider the following questions:

- Are they responding to petitions on time (within 120 days of receipt)?
- Are they providing a substantive response that clearly addresses the questions in the petitions?

4.124 More responses have met the 120-day deadline. Departments have responded positively to our previous concerns that petition responses were sometimes delayed beyond the 120-day deadline stipulated in the *Auditor General Act*. Exhibit 4.7 shows the performance of departments and agencies during the past year. We note the dramatic improvement in Fisheries and Oceans Canada's compliance with the statutory deadlines. This department and Environment Canada have established systems to monitor and track their responses internally.

Exhibit 4.7 **Assessment of timeliness of departmental responses to petitions, 16 July 2002 to 18 July 2003**

Petition No.	AAFC	CCRA	CIDA	DFAIT	DND	EC	F&O	Fin	HCan	IC	INAC	Justice	NRCan	Parks	PWGSC	TC	TBS
41B			●														
48						○	●										
49						●	○										
50				○	●	●	○		●				●				
51A							●							●			
51B							●							●			
52						●					●		●				
53														Withdrawn			
54							○										
55						●		●	●	●			●			●	
56						●	●									●	
57						●	●	●								●	
58						●		●		●			●				
59						●	●									●	
60													●				●
61						●											
62		●				●										●	
63						●							●				
64	●		●			●	●	●	○	●			●		●	●	
65						●		●		●			○				
66						●							●				
67			*	●		●	●		●	●	●	●	●	●			
68						●			○			●	●	●			
69						●							●				
70							●										
Total petitions	1	1	3	2	1	18	12	5	5	5	2	2	12	4	1	6	1
Percentage responded on time	100%	100%	100%	50%	100%	95%	75%	100%	60%	100%	100%	100%	92%	100%	100%	100%	100%

● Responded on time
○ Responded late
* Action ongoing

Agriculture and Agri-Food Canada (AAFC), Canada Customs and Revenue Agency (CCRA), Canadian International Development Agency (CIDA), Department of Canadian Heritage (DCH), Department of Foreign Affairs and International Trade (DFAIT), Department of National Defence (DND), Environment Canada (EC), Fisheries and Oceans Canada (F&O), Department of Finance Canada (Fin), Health Canada (HCan), Industry Canada (IC), Indian and Northern Affairs Canada (INAC), Department of Justice Canada (Jusice), Natural Resources Canada (NRCan), Parks Canada Agency (Parks), Public Works and Government Services Canada (PWGSC), Transport Canada (TC), Treasury Board Secretariat of Canada (TBS)

4.125 All but a few petition replies clearly responded to petitioners' questions. As we noted earlier, we monitor petition replies to assess whether or not they clearly respond to petitioners' concerns and requests. If required, we discuss petition responses with departments. We may ask them to provide a supplementary response if necessary. This year, such follow-up was required in only a small number of cases.

4.126 Ministers and departments are taking advantage of the opportunities presented by the petitions process. Ministers and departments have used petition responses for a number of purposes—for example, as a platform to clarify federal policies and positions and to explain their role and involvement in an issue. Petitions have prompted departments to initiate a research study, to launch an investigation, and become more engaged in a project. Departments have been prompted to hold interdepartmental meetings on a petitioned subject. Some have pledged to take action in response to petitions and have announced new policies or requirements. This is a result of the petitions process that can be valuable to all Canadians.

4.127 Departments and agencies have worked together on petitions that address complex policy issues. Often responsibility for an environmental issue raised in a petition is shared among several departments or agencies. In those cases, we ask more than one department or agency to respond to a petition, and the petitioner may therefore receive several responses. However, departments have sometimes chosen to work together to produce a single, joint response to a petition. This year, departments provided joint responses to petitions dealing with renewable energy (No. 58), fuel cell technologies (No. 65), and air pollution (No. 55, highlighted in the next section). All three petitioners were seeking clarification of federal policies or positions. We think joint responses can be a source of useful information for petitioners and all Canadians. They often present a co-ordinated and comprehensive statement of the federal position on complex issues.

Highlights of selected petitions and responses

Historic marine dumpsites of chemical and biological agents

4.128 Our 2002 Report mentioned a petition from Myles Kehoe, a resident of Cape Breton, concerning the dumping of mustard gas and other chemical warfare agents in the Atlantic Ocean by the Canadian military following World War II. The petitioner was worried about the impacts of these sites on the marine ecosystem, the safety of fishermen, and human health, especially in light of a growing interest in oil and gas exploration offshore. We asked National Defence and five other departments to respond to the petition (No. 50).

4.129 National Defence is the department with the lead responsibility for these sites. In his reply on behalf of the Department, the Minister of National Defence confirmed the existence and location of at least one historical mustard gas site and several old munitions disposal sites in Canadian waters.

4.130 The Minister also stated that National Defence had initiated a project that includes the following activities:

- All historical ocean disposal sites of chemical and biological warfare agents and munitions will be identified, surveyed, and assessed for risk to human health and the environment.
- Scientific research on the disposal of these warfare agents and munitions in the marine environment will be reviewed and compiled.
- Sites will then be prioritized, based on the risk assessments, for the development and implementation of site-specific action plans. Remediation or cleanup, as well as other mitigation measures, will be considered as options in the action plans.

Departments working with National Defence in the Interdepartmental Working Group on marine dumpsites:

- Environment Canada
- Fisheries and Oceans Canada
- Health Canada
- Natural Resources Canada
- Department of Foreign Affairs and International Trade

An Interdepartmental Working Group has been established to provide technical and scientific support to the project.

4.131 Since responding to the petition, National Defence has confirmed that it has committed $10.5 million to the project over the next five years. This petition (including responses), along with the others highlighted in this section, can be found in full on our petitions catalogue on our Web site: www.oag-bvg.gc.ca/environment.

Siting of a wind energy complex in Prince Edward Island

4.132 Wind power and other renewable energy sources are becoming more and more important in Canada, especially in light of the Kyoto Protocol. Jack Wilderom, who lives in Prince Edward Island, supports the concept of wind energy, but was concerned about a project that would locate a large wind power complex on the province's Malpeque Peninsula because of the site's importance to native, breeding, and migratory birds and its proximity to significant wetlands. In Petition No. 69, he challenged the project proponent's conclusion that the power complex would have only minimal impacts on bird populations. He requested a federal environmental assessment of the potential effects on birds and critical wetlands. We asked Environment Canada and Natural Resources Canada to respond to this petition.

4.133 In his response on behalf of Environment Canada, the Minister of the Environment said that in general he supports renewable energy technologies such as wind power, but he recognizes the importance of environmental assessment in avoiding or minimizing any adverse environmental effects that may be associated with a particular project.

4.134 The response indicated that Environment Canada is working with the Province of Prince Edward Island, which is conducting its own environmental assessment of the project. The Province has directed the proponent to study the effects of the proposed wind turbines on bird populations, especially migratory birds.

Enhanced public access to Canada-funded environmental assessments for hydro dam projects outside of Canada

4.135 In June 2002, Probe International asked the Canadian International Development Agency to specify its policy on funding environmental studies for proposed hydroelectric dam projects (Petition No. 41B). In an earlier petition (Petition No. 41A), the organization had expressed concern about limited public access to studies funded by CIDA for a proposed hydro dam in Belize. In responding to that petition, the Agency had stated that the information could be obtained only through a request under the *Access to Information Act*.

4.136 CIDA's response to the second petition indicates a change in direction. For new proposals submitted for funding of environmental studies related to hydro dams, CIDA now requires that a company performing the studies

- make initial and full environmental assessments and social impact studies available on the Internet prior to public consultations;
- identify in detail, at the project proposal stage, substantial developmental benefits of each dam;
- conduct, as the first deliverable, preliminary assessment of the potential positive and negative developmental impacts and hold public consultations on its preliminary assessment. This should include information on affected parks and protected areas; endangered species affected; resettlement; and results of public consultation.

These requirements also represent criteria that CIDA would use to reject funding proposals.

4.137 We conducted an audit of CIDA's implementation of one of these new requirements—the requirement to make initial and full environmental assessments and social impact studies available on the Internet prior to public consultations. The results of our audit are presented starting at paragraph 4.91.

Alleged sea lice infestation of wild salmon off the Pacific coast

4.138 In the Broughton Archipelago off the coast of British Columbia in 2001, a suspected outbreak of sea lice (a marine parasite) in wild pink salmon prompted the Living Oceans Society to submit a petition (No. 54) on behalf of the Musgamagw Tsawataineuk Tribal Council. The petition suggested that the sea lice originated in the Archipelago's numerous salmon farms. It questioned how Fisheries and Oceans Canada had dealt with the problem in the spring of 2001.

4.139 In his reply to the petition on behalf of Fisheries and Oceans Canada, the Minister stated that the Department assessed the presence of sea lice as part of its annual survey to assess the abundance of juvenile salmon in the coastal waters of British Columbia:

> The Departmental assessment found that the juvenile salmon sampled were in generally good health with low levels of sea lice infestation. There was no evidence of an epidemic nor was there evidence of a mass mortality of juvenile salmon.

4.140 The role of Fisheries and Oceans Canada and impacts of the aquaculture industry on wild salmon stocks are the subject of an audit that will be reported in the Auditor General's 2004 Report to Parliament.

Poor air quality and infringement of human rights

4.141 Air quality was the subject of a petition (No. 55) submitted by the Sierra Legal Defence Fund on behalf of Greenpeace Canada and the Toronto Environment Alliance. The petitioners argued that Canada has a legal obligation under international human rights law to do its utmost to provide for clean air to protect the lives and health of Canadians. They criticized the efforts of the federal government to address this problem, suggesting that it was violating these core human rights through its failure to adequately regulate air pollution and provide for legally binding air quality standards in Canada. The petitioners called for a review of Canada's policies, laws, and regulations on air pollution and air quality. They also made several suggestions to improve air quality. Six departments (Environment, Health, Transport, Finance, Industry, and Natural Resources) responded jointly to the petition. These departments did not directly address the issue of human rights protection. They emphasized the federal government's commitment to addressing air pollution. The response set out an extensive explanation of the federal agenda for clean air.

Contamination of Canadian harbours

4.142 Petitioners have asked whether the federal government is responsible for historical environmental problems that surface in harbours and what kind of oversight the government exercises in cases where problems of environmental contamination emerge. This is the case with two petitions, one involving Hamilton Harbour and the other, the Port Oshawa Marina (Petition No. 57 and No. 59 respectively). One is under the control of a federal port authority, the Hamilton Port Authority, the other under the one remaining federal harbour commission, namely the Oshawa Harbour Commission. Transport Canada's reply to Petition No. 59 on the marina at Oshawa suggests that the Department exercises very little oversight or control over harbour commissions, when environmental problems emerge. According to the Department, the harbour commission operates in accordance with the *Harbour Commissions Act* and is responsible for ensuring that it complies with all applicable environmental laws. The Transport Canada response also confirms that the lands and harbour "for which the Harbour Commission (Oshawa) has responsibility are not part of the Federal Contaminated Sites and Solid Waste Landfills Inventory."

Hamilton Harbour, Ontario, Petition No. 57.

Photo: Sierra Legal Defence Fund

Pesticides in national parks

4.143 The Parks Canada Agency has a mandate to protect the ecological integrity of Canada's national parks. The Saskatchewan Environmental Society asked in Petition No. 68 whether the Agency was contravening the *Canada National Parks Act* and its guiding principles and policies for national parks when it proposed to conduct an aerial pesticide spray program for spruce budworm in Prince Albert National Park.

4.144 In its response, Parks Canada stated that the proposal to spray went through a thorough third-party environmental assessment and was approved only after that assessment found no significant, unmitigable, adverse impacts on human health or the environment. The Minister indicated that Parks Canada was adhering to the *Canada National Parks Act* and its guiding principles; the site proposed for pesticide spraying is a townsite (zoned as Park Services Zone 5), where it is not uncommon for natural processes to be altered.

Draining of a lake for hydro generation

4.145 When the man-made Rocky Island Lake near Sault Ste. Marie, Ontario, was effectively drained for hydro generation in the summer of 2002, Ontario M.P.P. Tony Martin requested that Fisheries and Oceans Canada investigate a possible contravention of the federal *Fisheries Act* (Petition No. 70). The Department's response confirmed that it had launched an investigation of the matter. Mr. Martin also forwarded two applications to the Environmental Commissioner of Ontario under the Environmental Bill of Rights seeking answers from Ontario ministries.

4.146 Protection of fish and fish habitat continue to figure in many of the environmental petitions received by this Office.

Rocky Island Lake, Ontario. Photo: M. Gallagher

Rocky Island Lake after drainage. Photo: Peter Denley

Assessing the environmental impacts of new federal policies, plans, and programs

4.147 Since 1990, the Strategic Environmental Assessment (SEA) process (revised in 1999) has been in place through a federal Cabinet directive to include environmental considerations in developing federal programs and policies. A doctoral student, Rachel McCormick, petitioned 10 federal departments for details about how the process had been implemented (Petition No. 64). She also asked departments to describe how strategic environmental assessment had made a difference in the long run to federal policies and programs. This petition and the responses demonstrate that petitions provide a window into the federal government that otherwise might not be available.

4.148 One question in the petition was directed to the Department of Finance. It concerned the federal Budget and the rationale used to exclude the Budget from the SEA process, despite the fact that in the petitioner's view it met the criteria.

4.149 The Minister of Finance provided the following response to the question:

> "The federal Budget is a compendium of funding decisions on policies and programs…In all instances, as part of the policy approval process, SEAs should be conducted by sponsoring departments on their own initiatives…For these reasons, an SEA on the federal Budget would be duplicative."

4.150 How federal departments have put the strategic environmental assessment process into practice is the subject of an audit by the Commissioner, to be presented in the 2004 Report.

International obligations to increase Aboriginal involvement in resource management

4.151 International environmental conventions and agreements from the time of the 1992 Rio Declaration on the Environment and Sustainable Development to the action plans from the Johannesburg Summit of 2002 have committed Canada to advancing Aboriginal participation in resource management and capitalizing on traditional ecological knowledge. A petitioner from British Columbia asked the Government of Canada to outline how it will meet its specific commitments in these areas (Petition No. 67). We asked 10 departments and agencies to respond to this petition.

4.152 In their individual responses, the departments and agencies responding seized the opportunity to outline programs, policies, and legislation within their organizations. They highlighted those that specifically related to the participation of Aboriginal Canadians in the management of the environment and the incorporation of traditional ecological knowledge into decision making. One of the petitioner's questions referred to Principle 23 of the Rio Declaration, which relates to the protection of the environment for people under oppression, domination, and occupation. The ministers answered unanimously that this principle did not apply in the Canadian context.

Environment Canada study of the environmental effects of smelter slag

4.153 Environment Canada is currently wrapping up a research study on the environmental effects of smelter slag. This research project came about largely as a result of petitions submitted to us by Algonquin Eco Watch, the Wildlands League, and the Federation of Ontario Naturalists (later joined by the Sierra Club, Eastern Canada chapter).

Railway bed through Algonquin Provincial Park, Ontario, Petition No. 27A-D.

Photo: Algonquin Eco Watch

4.154 These petitions, which started in 2001 with Petition No. 27A, concerned the decommissioning of the Canadian National rail line running through Algonquin Provincial Park in Ontario. Among other issues, the petitioners suggested that migratory birds and other wildlife were at risk

because of heavy metals in the smelter slag that had been used on the abandoned rail bed. In its response to the petition, Environment Canada said that it had studied smelter slag but thought the slag in Algonquin Provincial Park would probably have a negligible effect on migratory birds, mainly because it was considered inaccessible to them. Environment Canada officials visited the site of the slag in November 2001 to verify that conclusion.

4.155 In 2002 when the petitioners pursued the matter in a further petition (No. 27C), the Minister of the Environment replied:

> The site visit by Environment Canada has led to a re-evaluation of the risks posed to grit-consuming birds. There is scientific uncertainty about the impact of slag particles on migratory birds in this setting.

That re-evaluation led to a research study funded by Environment Canada in the autumn of 2002, which is still under way.

Conclusion

4.156 This year we have seen positive developments in the use of the petitions process, the breadth of environmental issues raised by petitioners, and the level of effort departments are devoting to developing timely, comprehensive responses. Looking ahead, petitions continue to arrive almost weekly. A number of interesting responses are due fairly soon to petitions received near the end of the reporting period. Interested readers can monitor our Web site to see these responses as they are posted.

4.157 We expect that the petitions process will continue to serve Canadians and that departments will continue to respond to petitions effectively.

Appendix Petitions activity (16 July 2002 to 18 July 2003)

To access the full text of petitions and replies from December 1995 to 18 July 2003, go to our Petitions Catalogue on our Web site (www.oag-bvg.gc.ca/environment—see Environmental Petitions). If necessary, paper copies of the catalogue can be obtained on request.

Petition No. 27D: Destruction of fish habitat from railway decommissioning in Algonquin Provincial Park, Ontario

Date submitted: 19 March 2003

Petitioner(s): Algonquin Eco Watch, Wildlands League, Federation of Ontario Naturalists, and the Sierra Club, Eastern Canada Chapter

Summary: This is a follow-up petition on the alleged destruction of fish habitat arising from the decommissioning of the Canadian National (CN) main railway line through Algonquin Provincial Park. According to the petitioners, the construction of a right-of-way to facilitate the removal of tracks and ties during decommissioning caused ballast (smelter slag) to spill into nearby creeks and lakes. Fisheries and Oceans Canada visited the site as a result of the initial petition (petition No. 27A); however, the Department concluded that there had been no harmful alteration, disruption, or destruction of fish habitat as a result of the decommissioning work. In this further petition, the petitioners suggested that the Department should conduct a complete survey along the entire CN right-of-way (about 130 kilometers in length) prior to making a final determination about effects on fish habitat (Other related petitions include No. 27B and No. 27C).

Issues: Fisheries (habitat), biological diversity (wildlife) (watershed protection), water issues (water quality), and transportation (railways)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 89: Possible lead contamination in properties slated for redevelopment

Date submitted: 14 July 2003

Petitioner(s): Faye Morgan and several Canadian residents

Summary: This petition concerns suspected lead contamination in two properties located close to the Rideau and Ottawa rivers in Ottawa, Ontario. The petitioners want federal departments to intervene and require the property owners to conduct soil testing prior to any re-redevelopment of the properties.

Issues: Environmental assessment, fisheries (habitat), human health/environmental health (toxic substances), and water issues (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Replies pending

Petition No. 88: Genetically-engineered wheat and the future of Canadian agriculture

Date submitted: 18 July 2003

Petitioner(s): Greenpeace Canada

Summary: According to the petitioner, the federal government received a submission for approval of a variety of genetically engineered (GE) wheat in 2002. The petitioner is opposed to the environmental release of GE wheat. According to the petitioner, the introduction of GE wheat into fields, food, and wheat markets raises agronomic, health, economic, ethical, and social concerns. The petition seeks to clarify the federal government's policy and position on GE wheat and determine what action the government has taken, or will take, to prevent negative environmental impacts from GE wheat.

Issues: Agriculture (sustainable agriculture), biotechnology (GMOs) (regulation and policy), and international/bilateral issues (international environmental agreements)

Federal departments/agencies replying: Agriculture and Agri-food Canada, Environment Canada, Finance Canada, Foreign Affairs and International Trade Canada, Health Canada, Industry Canada, Natural Resources Canada, Parks Canada Agency, and Western Economic Diversification Canada

Status: Replies pending

Petition No. 87: Advertising and labelling of pesticides

Date submitted: 16 July 2003

Petitioner(s): Earth Action

Summary: This petition concerns pesticide labelling and advertising. The petitioner alleges that certain pesticide manufacturers and lawn care companies are contravening the federal *Pest Control Products Act* by making claims that certain pesticides are "green" or offer environmental benefits. The petitioner asks Health Canada to investigate and indicate what it is doing to enforce federal pesticide legislation.

Issues: Human health/environmental health (pesticides)

Federal departments/agencies replying: Health Canada

Status: Reply pending

Petition No. 86: Commercial tourist operation in Jasper National Park

Date submitted: 16 July 2003

Petitioner: Jasper Environmental Association

Summary: This petition concerns a commercial tourist operation on Maligne Lake in Jasper National Park. The petitioner contends that the tourist operation's activities are going to expand under new, proposed arrangements between Parks Canada and the operation owners. These include, among other things, longer hours of operation and a doubling of the capacity of tour boats on Maligne Lake.

Issues: Environmental assessment and biological diversity (conservation) (endangered species) (habitat) (protected areas)

Federal departments/agencies replying: Parks Canada Agency and Environment Canada

Status: Replies pending

Petition No. 85: Genetically engineered crops and products – trade and other international concerns

Date submitted: 17 July 2003

Petitioner: Greenpeace Canada

Summary: This petition covers a variety of issues pertinent to federal policies and positions with respect to genetically engineered (GE) crops and products. They include the following: Canada's position on the European Union's mandatory labelling and traceability program for GE crops and products, new international guidelines on food labeling, development assistance and GE crops, proposed bilateral arrangements for trade of Canadian agricultural products, and international markets for Canadian agricultural exports.

Issues: Agriculture (sustainable agriculture), biotechnology (GMOs) (regulation and policy) (enforcement), and international/bilateral issues (international environmental agreements) (international development assistance)

Federal departments/agencies replying: Agriculture and Agri-food Canada, Environment Canada, Industry Canada, Foreign Affairs and International Trade, Canadian International Development Agency, and Health Canada

Status: Replies pending

Petition No. 84: Effects of genetically engineered crops on soil health

Date submitted: 10 July 2003

Petitioner: Greenpeace Canada

Summary: According to the petitioner, little attention has been paid to the effects of genetically engineered (GE) crops on soil and soil health. The petitioner suggests that the federal government should invoke the precautionary principle and eliminate GE crops given the scientific uncertainty surrounding their effects on soil health. The petitioner also requests that the federal government undertake a series of independent, peer-reviewed studies on this issue.

Issues: Agriculture (sustainable agriculture), biological diversity, biotechnology (GMOs) (regulation and policy), human health/environmental health, and international/bilateral issues (international environmental agreements)

Federal departments/agencies replying: Agriculture and Agri-food Canada, Environment Canada, and Industry Canada

Status: Replies pending

Petition No. 83: Air pollution at the Canada–U.S. border

Date submitted: 10 July 2003

Petitioner: Leo Petrilli

Summary: This petition concerns the volume of truck traffic crossing the Canada–U.S. U.S. border at Windsor–Detroit. The petitioner alleges that air quality in Windsor has suffered due to a dramatic increase in trucks crossing the border since the adoption of the North American Free Trade Agreement. The petitioner wants to know what the federal government is doing to protect Canadians from exposure to environmental contaminants and to enforce pollution laws. The petitioner also wants the government to pay for an air quality study at the border.

Issues: Air issues (air quality) (transboundary concerns), and human health/environmental health, international/bilateral issues (trade), and transportation

Federal departments/agencies replying: Environment Canada and Health Canada

Status: Replies pending

Petition No. 82: Red Hill Creek expressway project, Hamilton, Ontario

Date submitted: 11 July 2003

Petitioner(s): Bob Hicks

Summary: This petition concerns the City of Hamilton's Red Hill Creek expressway project and federal environmental approvals required for the expressway project.

Issues: Biological diversity (watershed protection), environmental assessment, fisheries (habitat)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Reply pending

Petition No. 81: Fixed link bridge to the Toronto City Centre Airport, Toronto Islands

Date submitted: 14 July 2003

Petitioner: Lake Ontario Waterkeeper

Summary: This petition concerns the federal environmental assessment for the proposed fixed link bridge to the Toronto City Centre Airport. An environmental assessment was carried out for a similar proposal in the late 1990s, but the bridge was never constructed. Some changes have taken place in the meantime, including the construction of the Spadina Quay wetland.

Issues: Biological diversity (wetlands) (wildlife), environmental assessment, other (infrastructure), and water issues

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, and Transport Canada

Status: Replies pending

Petition No. 80: Clean-up of the Tracadie military training area in New Brunswick

Date submitted: 7 July 2003

Petitioner(s): Luc Perron, Donald Savoie, and Florent Richardson

Summary: This petition concerns clean-up of the Tracadie military training area and raises the same issues as petition No. 78. The petitioners are concerned that the presence of chemical and metallic contaminants represents a danger for the environment and water quality. The petition contains requests and recommendations about decontamination of the site and asks the government whether it will take additional steps to eliminate all forms of contamination at the former training area.

Issues: Human health/environmental health (contaminated sites) and other (military/defence)

Federal departments/agencies replying: Department of National Defence

Status: Reply pending

Petition No. 79: Air quality and health concerns in Windsor, Ontario

Date submitted: 26 June 2003

Petitioner: Joe Comartin, Member of Parliament, Windsor-St. Clair

Summary: A community health study undertaken in Windsor, Ontario is the focus of this petition. The results of this study suggest that cancer rates in Windsor are higher than in other parts of the country. Poor air quality is identified as a possible cause of this problem and other health problems found in the area. The petitioner asks federal departments to investigate the study findings and clarify whether, and to what extent, the government is taking action to address the concerns outlined in the study.

Issues: Air issues (air quality) (transboundary concerns), and human health/environmental health

Federal departments/agencies replying: Environment Canada, and Health Canada

Status: Replies pending

Petition No. 78: Clean-up of the Tracadie military training area in New Brunswick

Date submitted: 28 May 2003

Petitioner(s): Yvon Godin, Member of Parliament, Acadie-Bathurst

Summary: This petition concerns clean-up of the Tracadie military training area in New Brunswick, which was used by National Defence between 1942 and 1994. The petitioner suggests that the federal government should do a full decontamination of the training area. According to the petitioner, the work that has been done on the site was not done properly.

Issues: Human health/environmental health (contaminated sites) and other (military/defence)

Federal departments/agencies replying: Department of National Defence

Status: Reply pending

Petition No. 77: The relationship between international trade and the environment

Date submitted: 5 May 2003

Petitioner(s): Yuill Herbert

Summary: This petition examines the relationship between international trade and the environment. The petitioner argued that increased international trade leads to increased greenhouse gas emissions because of trade's heavy dependence on transportation. The petitioner asked the Department of Foreign Affairs and International Trade to explain how it reconciles trade promotion with the need to protect the environment.

Issues: Air issues (climate change), international/bilateral issues (international environmental agreements) (trade) (climate change), renewable and non-renewable resources (energy) (energy conservation), transportation, and other (economic instruments)

Federal departments/agencies replying: Department of Foreign Affairs and International Trade

Status: Reply pending

Petition No. 76: Low-level radioactive waste in Port Hope, Ontario

Date submitted: 15 April 2003

Petitioner(s): Lake Ontario Waterkeeper

Summary: This petition concerns the federal environmental assessment of the Port Hope Project for the remediation and management of low-level radioactive wastes located in various sites in the town of Port Hope and the former Hope Township. Natural Resources Canada is the federal responsible authority for the environmental assessment of the project.

Issues: Environmental assessment and human health/environmental health (radioactive waste)

Federal departments/agencies replying: Natural Resources Canada

Status: Reply pending

Petition No. 75: Boat mooring development in wetlands along the Trent–Severn Waterway

Date submitted: 28 March 2003

Petitioner(s): South Mariposa Lakefront Ratepayers Association

Summary: The petition concerns a plan to establish boat mooring for 66 boats in a wetland located in Lake Scugog on the Trent–Severn Waterway. According to the petitioner, the mooring facilities cannot be constructed without harming or disrupting fish habitat or wildlife such as migratory birds. The Association addressed several questions to the Parks Canada Agency as steward of the Waterway and administrator of regulations governing historic canals.

Issues: Biological diversity (habitat) (wetlands), environmental assessment, fisheries (habitat), and water issues (aquatic ecosystems) (navigable waters)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, and the Parks Canada Agency

Status: Replies pending

Petition No. 74: Ecological integrity of the Great Lakes

Date submitted: 4 April 2003

Petitioner(s): The Georgian Bay Association

Summary: This petition addresses several issues that are important to the ecological integrity of the Great Lakes: the withdrawal of fresh water from Lake Huron and Georgian Bay at the outflow into the St. Clair River near Sarnia; the introduction of invasive species by ships entering the Great Lakes Basin; the Great Lakes Navigation System Review; and, the future of the Welland Canal.

Issues: Biological diversity (invasive species) (watershed protection), environmental assessment, international/bilateral issues (international environmental agreements) (transboundary concerns) (climate change), transportation (shipping), and water issues (aquatic ecosystems) (watershed protection) (Great Lakes)

Federal departments/agencies replying: Environment Canada, Transport Canada, Fisheries and Oceans Canada, and the Department of Foreign Affairs and International Trade

Status: Replies pending

Petition No. 73: Environmental assessment of highway extension through Gatineau Park, National Capital Region

Date submitted: 20 March 2003

Petitioner(s): Association des Résidents et Résidentes du Quartier Wright

Summary: This petition pertains to the federal environmental assessment of the proposed extension of the McConnell-Laramée highway through Gatineau Park. The Association is concerned about public participation and the scope of the environmental assessment.

Issues: Environmental assessment, biological diversity (conservation) (habitat) (protected areas), and fisheries (habitat)

Federal departments/agencies replying: Transport Canada and Fisheries and Oceans Canada

Status: Replies pending

Petition No. 72: Preserving wetlands in the greater Montreal area

Date submitted: 19 March 2003

Petitioner(s): Comité Zip Ville-Marie

Summary: This petition concerns the potential sale of federal property located beside the St. Jacques River in the Greater Montreal area. According to the petitioner, a large portion of the land along the river was declared surplus by Transport Canada and may be sold soon. The Comité is concerned that the land will be sold without consideration for the long-term protection of wetlands on the property or the federal Policy on Wetland Conservation.

Issues: Biological diversity (conservation) (endangered species) (wetlands), water issues (aquatic ecosystems), and other (federal land)

Federal departments/agencies replying: Transport Canada and Environment Canada

Status: Replies pending

Petition No. 71: Access road to the MacKenzie King Estate in Gatineau Park, National Capital Region

Date submitted: 19 March 2003

Petitioner(s): Citizens Concerned about Gatineau Park

Summary: This petition concerns a proposal by the National Capital Commission (NCC) to construct a new access road to the Mackenzie King estate in Gatineau Park in the National Capital Region. The coalition critiqued the environmental assessment conducted by the NCC and posed questions about environmental standards and processes applied by the Parks Canada Agency for similar proposed projects within a national park setting.

Issues: Environmental assessment, biological diversity (conservation) (habitat) (protected areas), and other (federal land) (infrastructure)

Federal departments/agencies replying: Parks Canada Agency

Status: Reply pending

Petition No. 70: Draining of Rocky Island Lake in northern Ontario

Date submitted: 17 February 2003

Petitioner(s): Tony Martin, Member of Provincial Parliament, Sault Ste. Marie

Summary: This petition concerns the draining of Rocky Island Lake near Sault Ste. Marie, Ontario. Rocky Island Lake is a man-made reservoir created to generate hydroelectric power. The petitioner alleged that the level of the lake was drawn down substantially in the summer of 2002 in order to meet rising demands for power. He also claims that the draining of the lake led to the destruction of fish, fish habitat, and wildlife habitat, and that it inhibited boat navigation, hindered local businesses, and prevented local residents from enjoying the lake as usual. The petitioner asked Fisheries and Oceans Canada to investigate a possible contravention of the federal *Fisheries Act*. This is the first petition submitted by a provincial Member of Parliament.

Issues: Fisheries (habitat) (enforcement) and water issues (aquatic ecosystems) (navigable water)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 69: Wind energy project in Prince Edward Island

Date submitted: 6 February 2003

Petitioner(s): Jack Wilderom

Summary: The petitioner raised concerns about the siting of a wind energy complex in Prince Edward Island (P.E.I.). The proposal involves the placement of 40 or more large wind turbines in the Malpeque Peninsula in P.E.I. According to the petitioner, this area is blessed with significant populations of native, breeding and migratory bird species and is a major staging area for Canada geese and migratory ducks on the Atlantic flyway. It is also adjacent to a wetland of international importance under the Convention on Wetlands (Ramsar Convention). The petitioner challenges the proposal's conclusion that the project would involve only minimal impacts on birds in the area. He requested a federal environmental assessment to study the potential effects of the wind energy project on bird species and critical wetlands.

Issues: Biological diversity (endangered species) (protected areas) (wetlands) (wildlife), environmental assessment, and renewable and non-renewable resources (energy)

Federal departments/agencies replying: Environment Canada and Natural Resources Canada

Status: Completed

Petition No. 68: Pesticide spray program in Prince Albert National Park

Date submitted: 3 February 2003

Petitioner(s): Saskatchewan Environmental Society

Summary: This petition concerns a proposal by the Parks Canada Agency to conduct an aerial pesticide spraying program in the town site of Waskesiu Lake in Prince Albert National Park. The Saskatchewan Environmental Society is opposed to this proposal. It believes that the spraying program to control spruce budworm would pose significant risks to the environment and human health and would contravene the *Canada National Parks Act* and Parks Canada's Guiding Principles and Operational Policies. The petition contains a series of requests and recommendations.

Issues: Human health/environmental health (pesticides), biological diversity (endangered species) (habitat) (protected areas)

Federal departments/agencies replying: Parks Canada Agency, Department of Justice Canada, Health Canada, Environment Canada, and Natural Resources Canada

Status: Completed

Petition No. 67: Implementation of Rio Declaration principles for Indigenous people

Date submitted: 31 January 2003

Petitioner(s): A Canadian resident

Summary: This petition concerns sustainable development and Indigenous people and their communities. It follows from Canada's participation in the 2002 World Summit on Sustainable Development in Johannesburg, South Africa. At that meeting, Canada reaffirmed its commitment to implementing the principles outlined in the Rio Declaration on the Environment and Sustainable Development and the actions of Agenda 21. These include recognizing indigenous values, traditional knowledge and resource management practices and enabling participation by Indigenous people in sustainable development. The petitioner asks the federal government to outline how it will meet its commitments in these areas. Ten departments and agencies were asked to respond to this petition.

Issues: International/bilateral issues (international environmental agreements), and other (aboriginal concerns)

Federal departments/agencies replying: Environment Canada, Canadian International Development Agency*, Fisheries and Oceans Canada, Health Canada, Indian and Northern Affairs Canada, Industry Canada, Department of Justice Canada, Department of Foreign Affairs and International Trade, Natural Resources Canada, and Parks Canada Agency

Status: Completed
*Action on-going

Petition No. 66: Car-assembly plants and the Kyoto Protocol

Date submitted: 20 January 2003

Petitioner(s): Kevin Davis

Summary: The petitioner asserts that car-assembly plants are to be exempt from the federal emission regulations under the Kyoto Protocol and wants to know why.

Issues: Air issues (climate change) and international/bilateral issues (international environmental agreements) (climate change)

Federal departments/agencies replying: Environment Canada, Natural Resources Canada

Status: Completed

Petition No. 65: Federal government funding of hydrogen fuel cell research to combat climate change

Date submitted: 20 January 2003

Petitioner(s): Numerous Canadian residents

Summary: This petition follows the ratification of the Kyoto Protocol and is concerned about the federal government's research funding for hydrogen fuel cells and environmentally friendly vehicles. The petitioner expressed concern about greenhouse gases and pollution emissions from conventional internal combustion engines. The petitioner suggested that the government should promote sustainable development by increasing funding to develop and produce hydrogen fuel cell vehicles through research grants and tax incentives.

Issues: Air issues (air quality) (climate change), international/bilateral issues (international environmental agreements) (climate change), and renewable and non-renewable resources (energy conservation)

Federal departments/agencies replying: Environment Canada, Industry Canada, Department of Finance Canada, and Natural Resources Canada

Status: Completed

Petition No. 64: Strategic environmental assessment of federal policies, plans and programs

Date submitted: 7 January 2003

Petitioner(s): Rachel McCormick

Summary: This petition concerns the 1999 Cabinet directive on the environmental assessment of federal policy, plan and program proposals. The petitioner suggests that the directive is a tool for helping federal departments move towards a vision of sustainable development, but questions whether this directive has in fact changed any federal policies, plans and programs. The petition addresses many issues including the following: how the directive has changed federal plans, policies and programs; how departmental resources for conducting strategic environmental assessments are allocated; how individuals conducting the assessments are trained; how implementation of the assessments are internally monitored or audited; and how exemptions of specific policies, plans and resources are determined.

Issues: Environmental assessment

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Canadian International Development Agency, Environment Canada, Department of Finance Canada, Fisheries and Oceans Canada, Health Canada, Industry Canada, Natural Resources Canada, Public Works and Government Services Canada, and Transport Canada

Status: Completed

Petition No. 63: Ratification of the Kyoto Protocol

Date submitted: 7 January 2003

Petitioner(s): Eric Kennedy and numerous other students

Summary: This petition concerns the Canadian government's international commitments on climate change and the ratification of the Kyoto Protocol. The petitioners suggest that ratification of the Protocol is a significant first step in addressing climate change and that it is an excellent example of Canada's solidarity with the international community. The petitioners commend the government's decision to ratify the accord, however, they suggest that more measures need to be taken to slow climate change.

Issues: Air issues (climate change), and international-bilateral issues (international environmental agreements) (climate change)

Federal departments/agencies replying: Environment Canada, Natural Resources Canada

Status: Completed

Petition No. 62: Toxic waste transportation and disposal in Quebec

Date submitted: 19 December 2002

Petitioner(s): A Canadian resident

Summary: This petition pertains to the production and transport of hazardous waste, including hazardous waste imported into the province of Quebec from the United States. The petitioner requested information about how the federal government regulates and monitors the transport of hazardous waste, as well information about waste treatment site locations, procedures, and transportation routes used in Quebec.

Issues: Human health/environmental health (hazardous waste), international/bilateral issues (international environmental agreements) (transboundary concerns), and transportation

Federal departments/agencies replying: Environment Canada, Transport Canada, and the Canada Customs and Revenue Agency

Status: Completed

Petition No. 61: *Species at Risk Act*

Date submitted: 3 December 2002

Petitioner(s): Heather Mills and Dorrie Wiwcharuk

Summary: This petition concerns the new *Species at Risk Act*. The petitioners requested information about the criteria used to generate the list of wildlife species at risk, the protection of critical habitat, and how the Act will help to sustain biological diversity.

Issues: Biological diversity (conservation) (endangered species) (habitat) (wildlife)

Federal departments/agencies replying: Environment Canada

Status: Completed

Petition No. 60B: Insurance coverage and possible amendment of the *Nuclear Liability Act*

Date submitted: 18 July 2003

Petitioner: Siegfried (Ziggy) Kleinau (represented by the Canadian Environmental Law Association)

Summary: This petition is a follow-up to petition No. 60A. The petitioner is seeking more detailed information on federal plans to amend the *Nuclear Liability Act*, especially those provisions in the legislation related to insurance coverage. The petitioner seeks an increase in mandatory insurance coverage in line with international standards.

Issues: International/bilateral issues (international environmental agreements) and renewable and non-renewable resources (nuclear energy)

Federal departments/agencies replying: Natural Resources Canada

Status: Reply pending

Petition No. 60A: Ontario Power Generation's Western Waste Management Facility

Date submitted: 19 November 2002

Petitioner(s): Siegfried (Ziggy) Kleinau

Summary: This petition concerns Ontario Power Generation Inc.'s (OPG) Western Waste Management Facility. The facility, which is located near Tiverton, Ontario on the shores of Lake Huron, is to be used for processing and storing radioactive waste. The petition was prompted by the Canadian Nuclear Safety Commission's decision to designate the facility a "nuclear installation" site under the *Nuclear Liability Act*. As part of its decision, the Commission set the insurance coverage the OPG should maintain for the facility (in accordance with the limits prescribed in the Act). The petitioner suggests that the risks associated with the site are extremely high and that the prescribed insurance levels are inadequate, given the threat the facility poses to the environment and the health of Canadians. The petitioner requested that the Act be amended and that mandatory operator-held insurance coverage be increased substantially.

Issues: Renewable and non-renewable resources (nuclear energy), and water issues (Great Lakes)

Federal departments/agencies replying: Natural Resources Canada and the Treasury Board of Canada, Secretariat

Status: Completed

Petition No. 59: Proposed redevelopment of the Oshawa Marina

Date submitted: 5 November 2002

Petitioner(s): Lake Ontario Waterkeeper

Summary: This petition concerns the Oshawa Harbour Commission's (OHC) proposal to redevelop the Oshawa Marina. The petitioner alleges that the proposal involves infilling a former waste disposal site located on the Marina's property. The petitioner suggested that the site contains hazardous waste that is leaking into the Oshawa Harbour and, subsequently, into Lake Ontario. The petitioner is also concerned about potential violations of the *Fisheries Act* and has requested information about federal regulatory controls and environmental assessment requirements for redeveloping the site.

Issues: Fisheries (habitat) (enforcement), human health/environmental health (hazardous waste) (contaminated sites), transportation, and water issues (aquatic ecosystems) (enforcement) (Great Lakes) (navigable waters) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, and Transport Canada

Status: Completed

Petition No. 58: Renewable energy production and conventional energy subsidies

Date submitted: 21 October 2002

Petitioner(s): One Sky – The Canadian Institute of Sustainable Living

Summary: The petitioner is concerned that federal government subsidies within the energy sector discourage research into new renewable energy sources and, therefore, inhibit sustainable development. The petitioner suggested that the federal government should remove government subsidies for fossil fuels and nuclear energy to strengthen Canada's renewable energy sector. The petitioner also requested information about current federal initiatives that develop and promote new renewable energy sources. This petition follows the 2002 World Summit on Sustainable Development, held in Johannesburg, South Africa.

Issues: Renewable and non-renewable resources (energy), transportation, and other (economic instruments)

Federal departments/agencies replying: Natural Resources Canada, Environment Canada, Department of Finance Canada, and Industry Canada

Status: Completed

Petition No. 57: Coal tar contamination near Randle Reef, Hamilton Harbour

Date submitted: 16 October 2002

Petitioner(s): Mark Sproule-Jones and Lynda Lukasik (represented by the Sierra Legal Defence Fund)

Summary: This petition concerns the presence of contaminated sediment near Randle Reef in the Hamilton Harbour. The petitioners allege that the sediment bed is contaminated with coal tar containing polycyclic aromatic hydrocarbons (PAHs), which are persistent, carcinogenic, bioaccumulative toxins. The petitioners are requesting that federal government departments do the following: provide funding to clean up the contaminated sediment; take action to prevent the disturbance or dispersion of the contaminated sediment; investigate, under the *Fisheries Act*, shipping activity within the Hamilton Harbour that is contributing to dispersing the contaminated sediment; and explain the proposal for infilling the contaminated area near Randle Reef.

Issues: Environmental assessment, fisheries (habitat), human health/environmental health (toxic substances), transportation (shipping), and water issues (aquatic ecosystems) (enforcement) (Great Lakes) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, Department of Finance Canada, and Transport Canada

Status: Completed

Petition No. 56: Invasive aquatic species in the Great Lakes

Date submitted: 30 September 2002

Petitioner(s): John E. F. Misener and numerous Canadian residents

Summary: This petition addresses the environmental consequences and economic costs associated with invasive aquatic species, such as zebra mussels, entering the Great Lakes Basin. The petitioners suggest that ship ballast tanks are key points of entry for non-native species. They recommend that Canada could reduce the influx of many of these invasive species by adopting procedures to clean and inspect ballast tanks in Canadian and overseas ports, and by strictly controlling the movement of ships within the Basin.

Issues: Biological diversity (invasive species), transportation (shipping), and water issues (aquatic ecosystems) (enforcement) (navigable waters) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, and Transport Canada

Status: Completed

Petition No. 55: Regulation of air pollution in Canada

Date submitted: 22 August 2002

Petitioner(s): Greenpeace Canada and the Toronto Environmental Alliance (TEA) (represented by the Sierra Legal Defence Fund)

Summary: This petition concerns federal control of air pollution and the creation of legally binding air quality standards. The petitioners allege that the federal government has failed to provide adequate regulations to control air pollution and is therefore violating basic human rights related to life, health and security of person. The petition contains many suggestions for improving air quality in Canada, including the following: establishing binding national ambient air quality standards; using the *Canadian Environmental Protection Act* to designate more air pollutants as toxic substances; adopting stricter vehicle emission standards; immediately reducing the sulphur content in gasoline; and increasing funding for public transportation planning.

Issues: Air issues (air quality) (transboundary concerns), human health/environmental health, international/bilateral issues (international environmental agreements) (transboundary concerns), and transportation

Federal departments/agencies replying: Environment Canada, Department of Finance Canada, Heath Canada, Industry Canada, Natural Resources Canada, and Transport Canada

Status: Completed

Petition No. 54: Sea lice infestation of wild salmon smolts, British Columbia—Federal management of salmon aquaculture

Date submitted: 27 May 2002

Petitioner(s): Musgamagw Tsawataineuk Tribal Council

Summary: The petitioner raised concerns about the overall management of the salmon aquaculture industry in British Columbia in the wake of an alleged outbreak of sea lice in wild salmon smolts in the Broughton Archipelago (in the Queen Charlotte Sound) in 2001. The Tribal Council asserts that there is evidence to suggest that the sea lice originated from fish farms in the area.

Issues: Fisheries (aquaculture) (habitat)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 52: First Nations participation in climate change strategies

Date submitted: 6 May 2002

Petitioner(s): Assembly of First Nations

Summary: The petition concerns the engagement of First Nations and the Assembly of First Nations (AFN) in federal climate change activities and the Indian and Northern Affairs Canada Environmental Stewardship Strategy for Reserve Lands. The AFN specifically requested information pertaining to funds that had been earmarked to engage First Nations in the development of federal strategies to address climate change, including an Aboriginal climate change strategy.

Issues: Air issues (climate change), international/bilateral issues, and other (Aboriginal concerns)

Federal departments/agencies replying: Environment Canada, Indian and Northern Affairs Canada, and Natural Resources Canada

Status: Completed

Petition No. 51B: Proposed boat launch on the Trent–Severn Waterway, Ontario—Follow-up petition on protecting fish habitat

Date submitted: 9 December 2002

Petitioner(s): Peter Weygang

Summary: This is a follow-up to petition No. 51A concerning the proposed construction of a boat launch on the Trent-Severn Waterway in Ontario. The petition raises concerns about the possible destruction of sensitive fish habitat along the Waterway, the timing of ecological habitat evaluations, and the protection of stream bank vegetation. It also explores the protection of fish habitat, given the agreement between Parks Canada and Fisheries and Oceans Canada.

Issues: Fisheries (habitat), biological diversity (habitat), water issues (aquatic ecosystems) (water quality), and other (interdepartmental arrangements)

Federal departments/agencies replying: Parks Canada Agency and Fisheries and Oceans Canada

Status: Completed

Petition No. 51A: Proposed boat launch for the Trent–Severn Waterway, Ontario

Date submitted: 30 April 2002

Petitioner(s): Peter Weygang

Summary: The petition concerns the proposed construction of a public boat launch ramp on Pigeon Lake, which forms a part of the Trent–Severn Waterway. The petitioner asserted that notwithstanding Parks Canada's original position to prohibit development at the location in question (sensitive fish habitat), the Agency issued a permit authorizing the construction of a boat launch in February 2002.

Issues: Fisheries (habitat), biological diversity (wildlife), and water issues (water quality)

Federal departments/agencies replying: Parks Canada Agency and Fisheries and Oceans Canada

Status: Completed

Petition No. 50: Military dumpsites off Canada's Atlantic coast

Date submitted: 2 April 2002

Petitioner(s): Myles Kehoe

Summary: The petitioner raised concerns about the proposed oil and gas exploration projects off Canada's Atlantic coast. Through his own research, the petitioner has documented the presence of numerous chemical weapons dumpsites and military dumpsites of unexploded ordnances off the coast of Nova Scotia and Newfoundland. The petitioner expressed concern about the potential impacts that oil and gas exploration might have on these sites.

Issues: Water issues (marine environment/oceans), other (military/defence), and renewable and non-renewable resources (energy)

Federal departments/agencies replying: Department of Foreign Affairs and International Trade, Department of National Defence, Environment Canada, Fisheries and Oceans Canada, Health Canada, and Natural Resources Canada

Status: Completed

Petition No. 49: Protecting fish habitat—Forestry practices in British Columbia

Date submitted: 26 March 2002

Petitioner(s): Natural Resources Defence Council Environmental Education Society (NRDC)

Summary: The petitioner is concerned about logging practices in British Columbia relative to fish habitat. The NRDC alleges that government authorities are not enforcing the provisions of the *Fisheries Act* and policies on buffer zones around small and feeder streams.

Issues: Fisheries (habitat) (enforcement) and renewable and non-renewable resources (forestry)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Completed

Petition No. 48: Environmental impacts of proposed power generating station

Date submitted: 12 March 2002

Petitioner(s): Citizens Environment Alliance of southwestern Ontario and southeast Michigan

Summary: This petition concerns a proposal to locate a 580-megawatt natural gas electricity generating station on the Canadian side of the Detroit River in Windsor, Ontario. Among other things, the Alliance is concerned about air emissions and discharges of large quantities of heated cooling water into the river.

Issues: Fisheries (habitat), air issues (air quality), environmental assessment, international/bilateral issues (international environmental agreements), renewable and non-renewable resources (energy), and water issues (aquatic ecosystems) (navigable waters) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Completed

Petition No. 47: Lifting of the moratorium on new fish farming licences, British Columbia

Date submitted: 27 February 2002

Petitioner(s): David Elderton

Summary: The petitioner expressed concern about the lifting of the moratorium on new fish farming licences in British Columbia. He cited a recent inquiry into salmon farming in B.C. and requested that Fisheries and Oceans Canada take steps to ensure that the provincial decision to lift the moratorium will not lead to further environmental problems.

Issues: Fisheries (aquaculture)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

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